

IMPROVING NATO'S CAPABILITIES:
A ROADMAP TO 2020

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General Studies

by

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ABSTRACT

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Using a comprehensive approach, this study aims to recommend measures that will improve NATO's capabilities and make it a more efficient organization. For any military organizations, adjusting capabilities to governmental ambitions and strategic goals is fundamental. As such, NATO needs to continuously adjust its posture and capabilities to remain relevant in face of new threats and new requirements, especially since the end of the Cold War. This adjustment is even more pressing in the present context of financial austerity and of the upcoming important downsize in Afghanistan. Through a thorough review of NATO's evolution of the last 20 years, this study will demonstrate that although NATO is attempting to transform and adapt, its operational efficiency still suffers from important capability shortages and challenges. In order to tackle this crucial issue, a "roadmap toward 2020" containing various measures will aim to improve NATO's relevancy going forward.

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ACRONYMS

ABCT	Armored Brigade Combat Team
ACT	Allied Command Transformation
AGS	Air-Ground Surveillance program
AWACS	Airborne Warning and Control System
BCT	Brigade Combat Team
CBRN	Chemical, Biological, Radiological and Nuclear
CPG	Comprehensive Political Guidance
DCI	Defense Capability Initiative
DoD	Department of Defense
EU	European Union
GDP	Gross Domestic Product
HQ	Headquarter
IED	Improvised Explosive Device
IFOR	Implementation Force
IRF	Immediate Response Force
ISAF	International Security for Afghanistan Force
ISR	Intelligence, Surveillance and Reconnaissance
ISTAR	Intelligence, Surveillance, Target Acquisition and Reconnaissance
KFOR	Kosovo Force
LoA	Level of Ambition
MDN	Multi-National Division
MJO	Major Joint Operation
MRAP	Mine Resistant Ambush Protected (Armored Vehicle)

NATO	North Atlantic Treaty Organization
NDPP	NATO Defense Planning Process
NRF	NATO Response Force
PCC	Prague Capability Commitments
PGM	Precision Guided Munition
R&D	Research and Development
RAND	Research ANd Development (Nonprofit global policy research think tank)
RMA	Revolution in Military Affairs
SAC	Strategic Airlift Capability
SALIS	Strategic Airlift Interim Solution
SEAD	Suppression of Enemy Air Defense
SFOR	Stability Force
SJO	Small Joint Operation
UAV	Unmanned Aerial Vehicle
UK	United Kingdom
UN	United Nations
US	United States
USAF	United States Air Force
USMC	Unites States Marine Corps

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CHAPTER 1

INTRODUCTION

The measure of intelligence is the ability to change.

— Albert Einstein, *Goodreads*

The aim of this paper is to analyze the North Atlantic Treaty Organization (NATO) by examining how it can best adapt in order to remain relevant in the future. It aims to make recommendations based on the findings of this analysis.

Background

NATO has proven its value since its creation in 1949. It has brought security and protection to its members, as well as a sense of peace, stability and unity within Western Europe after centuries of military confrontation. NATO was also the first formal link between the democracies of North America and Europe, or what is now known as the “West.” The original aim of this Western military alliance was to deter and/or respond to outside aggression, mainly from the Soviet Union. But when the Soviet Union collapsed in 1990, NATO’s foremost purpose vanished in a matter of days. To remain relevant, the alliance had to change and adapt to its new environment. As a western alliance, it realized it could serve other purposes and promote western values like democracy, human rights and free trade. It opened its borders to new members and found a niche in military interventions to promote these values. This adaptation first led to military interventions inside Europe in Bosnia and Kosovo in the 1990s, then eventually outside its borders in Afghanistan and Libya in the following decade.

These military interventions showed NATO's capacity to actively contribute to the security of its members by directly intervening in a torn country, whether inside or outside Europe, its traditional sphere of influence. But they also showed inefficiencies and continual challenges related to the disparities in military capabilities and commitments of its members. These disparities in capabilities were also demonstrated during other US-led military interventions outside of NATO's responsibility (Iraq in 1990 and 2003, Afghanistan in 2002). Although some NATO members contributed to these operations, a concerning trend for NATO's future was set. On the high intensity end of the spectrum of conflicts, the United States has the ability and willingness to act outside of NATO's frame. This trend is concerning for NATO as it can affect its relevancy. These disparities in military capabilities and commitments to NATO-run operations can also create different classes (or tiers) within the alliance, and ultimately negatively affect its overall efficiency, interoperability and capacity to act in a concerted way.

Today, as the large scale mission in Afghanistan winds down and the security budgets of Alliance members suffer from the state of public finances, NATO is once again at a defining moment that will influence its future for a long time to come. While money and resources are growing scarce in Western countries, new threats are emerging, like nuclear proliferation, ethnic strife, terrorism, cyber-attacks, environmental disasters and energy security to name a few. In this chaotic environment, NATO's challenges to remain relevant and capable to intervene militarily in a concerted and efficient way will be of great importance going forward. This study will make recommendations on the way

ahead by analyzing NATO's capability challenges and assessing ways to address it for the future.

Primary and secondary research questions

How can NATO best address its capability challenges and remain relevant going forward? To answer this question, six secondary questions will be addressed:

1. What capability requirements NATO military interventions have shown in the 1990s?
2. What commitments resulted from NATO summits and strategic guidance since the Washington Summit in 1999?
3. How did NATO nation's military capability building evolve in the past decade to adapt to commitments and previous shortfalls?
4. What capability challenges still remain today?
5. What trends will affect NATO's capability building in the future?
6. How do NATO intends to address its capability challenges?

Assumptions

1. NATO nations will continue to seek a credible and efficient military alliance for the foreseeable future.
2. NATO nations are looking to continuously adapt to meet future challenges.
3. NATO nations will continue to consider NATO to be a cheaper alternative to independent defense.

Definitions

Listed below are descriptions and explanations of relevant terms that will assist the reader to better understand this study.

Burden-sharing. It is the action of dividing the costs (financial, equipment, troops, etc.) associated with NATO's day to day operations or military interventions.

Capabilities. Resources necessary for the conduct or the potential to conduct operations. This study will concentrate on three capabilities: human, equipment and financial resources.

Military burden. Metric used to measure military expenditures and their economic significance and impact. It is defined as the ratio of military expenditures to Gross Domestic Product and gives a good indication of relative military expenditures.

NATO Transformation. A process created to modernize allied armed forces along US approach to warfare. This includes doctrinal concepts, technologies, capabilities and organizational structures.

Operational approach. Process to formulate broad general actions to solve a problem based on the understanding of an operational environment and conditions.

Smart defense. NATO Secretary General Anders Fogh Rasmussen proposed concept to pool and share capabilities within the alliance. Also relates to better coordination better allies.

Limitations

The main limitation of this research is that it will be based on unclassified information for the precise capabilities of the member countries. The possibilities are therefore limited and will have an impact on possible recommendations. Also, this

research will focus on Army and Air Force capabilities, as they were the main elements used on NATO operations since the end of the Cold War.

Scope and Delimitations

This research will focus on the changes to NATO that occurred since the end of the Cold War, hence will cover the period from 1990 to this day.

Significance of the Study

With the Afghan mission winding down and the difficult financial situation of Western democracies, NATO is at a critical moment in its history. It will soon face, if it doesn't already, the difficult challenge to find the best ways to maintain its military power by aligning the right capabilities to the right requirements taken from the right appreciation of the security situation. In other words, it will have to face the difficult task to synchronize its capabilities to be able to cope with the perceived threats. The purpose of this study will be to address this issue by making recommendations on the way ahead in order to make a positive contribution to the future of the alliance.

CHAPTER 2

LITERATURE REVIEW

The purpose of this chapter is to paint a picture of the situation through a review of the writings and comments from the body of literature. The first part of this chapter identifies the main issue as the disparity between the US and the rest of the alliance nations in military capabilities and in contributions to NATO-run operations. These disparities are largely due to major differences in military budgets, allocated resources and national policies, but the literature also points to the organizational structures of NATO nations to explain the differences in capabilities and contributions. The second part of this chapter will focus on the evolution of NATO since the end of the Cold War through four major military interventions (Bosnia, Kosovo, Afghanistan and Libya) and bi-annual NATO summits that resulted in various important initiatives aimed at improving cooperation, effectiveness and overall capabilities. It will demonstrate that NATO's evolution is leading it into the path of transformation for a more agile, adaptable and deployable force. However, it will also show that the overall body of literature remains skeptical about NATO's capacity to change into a more efficient force capable of achieving its level of ambition.

The Issue

In an informational February 2012 document prepared for members and committees of US Congress, Carl Ek identified two main methods NATO countries contribute to the alliance capabilities and responsibilities. The first method is by national

financial contributions to NATO-run budgets. There are three NATO-run budgets that require predictable financial contributions from the participating nations:

1. NATO Civil Budget: Supports the Brussels headquarters (HQ) and its international civilian staff, which are responsible for policy planning of operations and capabilities, liaison with non-alliance partner countries, and public diplomacy aimed at building international support for NATO;
2. NATO Military Budget: Operational and maintenance costs for the various operational HQ and their international military staff, as well as military related activities like the Airborne Warning and Command System (AWACS) operations;
3. NATO Security Investment Program (NSIP): Formally known as the Infrastructure Fund, this budget funds military installations and construction projects. It is mainly aimed at improving mobility and flexibility with logistic installations, harbors and airfields, storage facilities and even training installations.

The contributions are rigorously negotiated and are based on military burden potential like Gross Domestic Product (GDP), per capita Gross National Income and other factors. Figure 1 below shows each countries' contributions to the funds. These expanses are relatively small in comparison to other expenses related to a military intervention and amalgamate to only half a percentage of all defense expenses of the allies.¹ Further, they are predictable expenses that governments can budget for in advance.

Table 1. NATO Common Funded Budgets Cost Shares, 2012 (expressed in percent)				
Member State	Civil budget	Military budget	NSIP	Average
Albania	0.0833	0.0652	0.0843	0.0776
Belgium	2.0571	2.3407	2.1048	2.1675
Bulgaria	0.3066	0.2382	0.3068	0.2839
Canada	5.9380	6.3769	5.9358	6.0836
Croatia	0.3060	0.2407	0.3115	0.2861
Czech Republic	0.9302	0.9663	0.9344	0.9436
Denmark	1.2277	1.4689	1.3409	1.3458
Estonia	0.1005	0.0780	0.1004	0.0930
France	11.4847	8.8956	11.1726	10.5176
Germany	14.6084	17.3552	14.8882	15.6173
Greece	0.9309	0.9143	1.1029	0.9827
Hungary	0.6985	0.7102	0.7005	0.7031
Iceland	0.0513	0.0387	0.0492	0.0464
Italy	8.7302	8.4218	8.6471	8.5997
Latvia	0.1437	0.1122	0.1447	0.1335
Lithuania	0.2131	0.1662	0.2143	0.1979
Luxembourg	0.1411	0.1302	0.1393	0.1369
Netherlands	3.2277	3.3545	3.2855	3.2892
Norway	1.4887	1.4762	1.5082	1.4910
Poland	2.4701	2.5174	2.4908	2.4928
Portugal	0.9434	0.7964	0.8500	0.8633
Romania	1.0505	1.1272	1.0629	1.0802
Slovakia	0.4500	0.3530	0.4563	0.4198
Slovenia	0.2330	0.1806	0.2323	0.2153
Spain	4.8898	4.4968	4.8892	4.7586
Turkey	3.6104	3.0971	3.6794	3.4623
United Kingdom	11.9457	8.9325	11.1677	10.6820
United States	21.7394	25.1464	22.2000	23.0286
Total	100	100	100	100

Source: Created by author with data extracted from: Carl Ek, *NATO Common Funds Burden-sharing: Background and Current issues*, CRS Report for Congress (Washington, DC: The Library of Congress, 2012).

The second contribution method is much more contentious in nature because it resides in the individual military capabilities of the nations and their commitments to NATO-run operations. In other words, it is by their inventory in material and personnel, and their willingness to commit those forces. Because NATO is an alliance of sovereign members and contributions are done on a voluntary basis, it has always faced capability challenges and will continue to do so in the future.

Over the years, NATO has developed standing common organizations like multinational headquarters, the fleet of AWACS program and the NATO Response Force (NRF). However, the greater part of the military capabilities is controlled at the member's national level and will continue to do so for the foreseeable future. Although understandable under national expectations, this structure naturally implies disparities in capabilities and in contribution levels. It is only normal that nations, with their differences in size, economies and culture, contribute differently. Nevertheless, disparities in capabilities and contribution levels have a significant impact on the efficiency and relevancy of an alliance. It also creates a perceived inequity that can prove detrimental to the alliance on the long term.

These disparities have been identified by the literature as the burden-sharing issue and reside for the great part in the major differences between the United States and the other NATO nations. Since the creation of NATO in 1949, the US is the overwhelmingly biggest contributor to the capabilities of the alliance. Although rich countries by world standards, most of the other alliance members pale in comparison for what they bring to the table. To explain this situation, most of the literature point to the important difference

in military expenditures between the US and the other NATO members. It is the most publicized and well known issue of NATO's burden-sharing.

In his essay titled *Pillar or Pole? NATO, European Security and Defense Initiatives, and the Transatlantic Relationship*, Jordan Becker shows the disparity between the US and most European countries in their defense budgets. He uses the burden-sharing gap to show this cleavage (figure 1). Although the overall tendency shows European countries closing the huge gap since the 1950s, the disparity has been increasing since the start of the new millennium, perhaps because of the increase in US military spending since 9/11 coupled with European defense cuts. In figure 2, we can see a clear trend. Even with a population roughly twice as big as the US, NATO's European countries total annual military expenditures were equivalent to only two-thirds of American expenditures in 2000.² Today, according to a Carnegie Endowment article, this ratio is under 50 percent as most European countries actually spend much less than the benchmark 2 percent of GDP on defense.³ While the US are spending actually just under 5 percent of GDP on defense expenditures, only three European countries are presently spending more than 2 percent: Britain, France and Greece.⁴

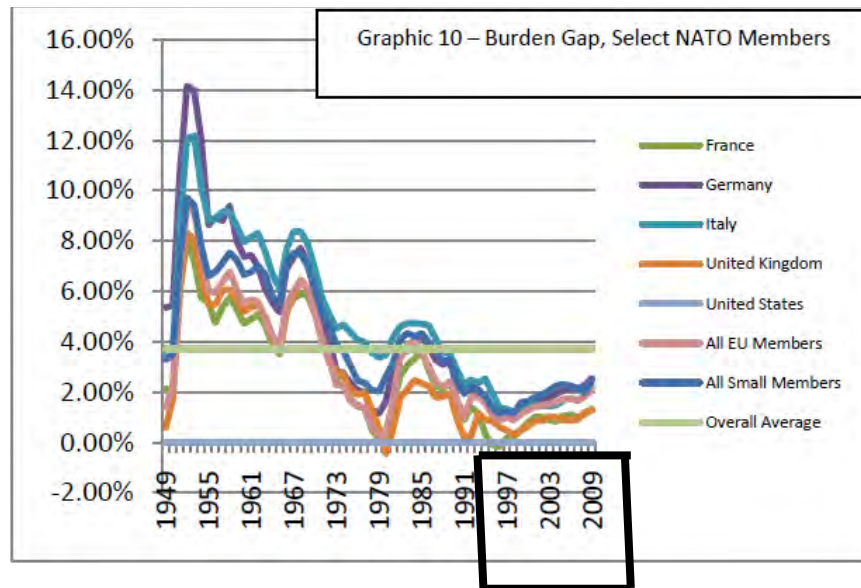


Figure 1. Burden gap within selected NATO countries

Source: Jordan Becker, “Pillar or Pole? NATO, CSPD, and the Transatlantic Relationship,” *The Atlantic Community*, http://www.atlantic-community.org/index/Open_Think_Tank/Pillar_or_Pole%3F_NATO%2C_CSPD%2C_and_the_Transatlantic_Relationship (accessed 8 October 2012), 37.

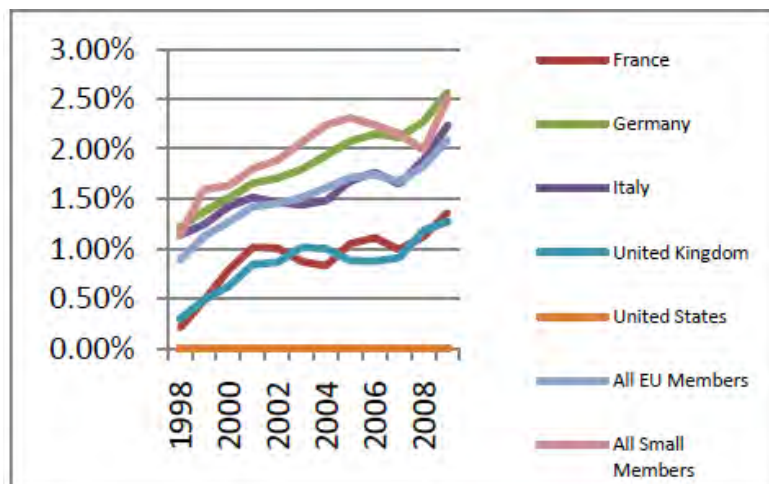


Figure 2. Recent burden gap for selected NATO countries

Source: Jordan Becker, “Pillar or Pole? NATO, CSPD, and the Transatlantic Relationship,” *The Atlantic Community*, http://www.atlantic-community.org/index/Open_Think_Tank/Pillar_or_Pole%3F_NATO%2C_CSPD%2C_and_the_Transatlantic_Relationship (accessed 8 October 2012), 36.

The burden-sharing issues are not new. Since its origins following World War II, there have been continual initiatives to improve NATO member's commitment to budgets, resources and technological developments. In a recent military history thesis on the evolution of NATO, LTCOL (USMC) Joseph J. Russo identified the many pleas made by US Presidential administrations or US Congress for better transatlantic burden-sharing:

1. President Kennedy's call in 1961 for "twin pillars" of effort between the US and its European Allies;
2. The 1974 Jackson-Nunn Amendment called for European allies to offset the balance of payments to NATO as compensation for the cost of stationing US forces in Europe;
3. President Carter's call in 1977 for a goal of NATO defense spending at a rate of three percent above inflation;
4. Congressional calls throughout the 1980s to withdraw US forces from Europe in light of European failures to meet the three percent defense expenditure goals.⁵

While the disparities in military budgets have always been an issue, the current financial and economic recession will not help to solve this situation. Most, if not all, NATO countries are facing difficult public finance situations, which in turn put enormous pressure on lowering defense budgets. There are actually four members with a national debt to GDP ratio of more than 100 percent and the overall average for the Euro area is above the 75 percent mark⁶. Figure 4 shows the magnitude of these national debts in comparison to the size of their respective economies. The situation is alarming, especially

when considering the low economic growth forecast for the coming years, the demographic curve of these countries and the predictable increase in interest rates in the coming years. This state of affairs is recognized by the NATO's Secretary General, Anders Fogh Rasmussen, who stated during the Lisbon Summit of 2010:

At the moment, all Allies have to cope with the serious effects of the economic crisis. That is a simple reality. And cuts are inevitable. However, we need to be aware of the potential long-term negative effects if we implement defense cuts that are too large and disproportionate. European allies, in particular, must resist the temptation to disinvest too much in defense, and let the transatlantic defense spending gap widen any further. We must ensure cohesion across the Alliance in our defense decisions. Our guiding principle should be to cut fat, and build up muscle.⁷

Considering the importance of the US as the main contributor to the alliance, these levels of debt will without a doubt have major implications on the alliance member's future defense expenditures and their ability to provide military capacities. For instance, US Congress Budget Control Act of August 2011 requires Department of Defense budget reductions of \$487 billion over the next 10 years. In Europe, all of the countries have already made serious cutbacks or are contemplating them. Even the bigger economies like Britain, France and Germany have made serious cuts to their defense budgets.⁸ One can only imagine what is in store for countries with major financial difficulties like Greece, Spain and Italy. In Canada, the government is looking to solve the 2011 deficit of \$33 billion by 2015 with major budget reduction on all its ministries. For the 2012-13 financial year, the defense budget has been cut by more than 1 billion dollars, which is roughly a 5 percent cut. The first repercussions were quickly announced by Peter Mackey, Canada's Defense Minister, on 17 March 2012: Canada is pulling out of NATO programs operating unmanned aerial vehicles and AWACS in order to save \$90 million per year.⁹

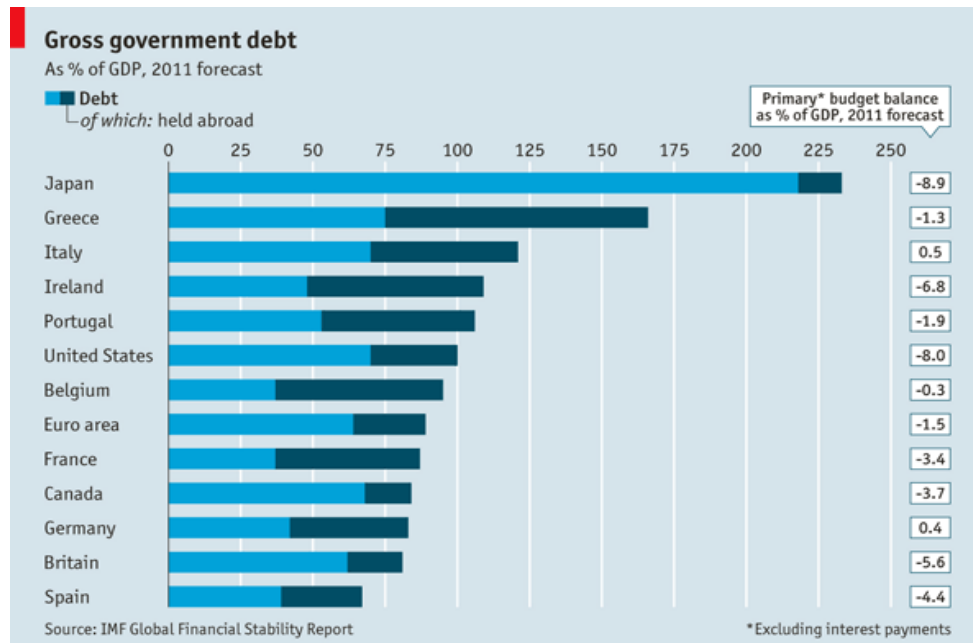


Figure 3. Governmental debt in relation de GDP

Source: The Economist, "Government Debt: Debt, Deficits and the Markets," 21 September 2011, <http://www.economist.com/blogs/dailychart/2011/09/government-debt> (accessed 4 December 2012).

The literature on burden-sharing issues also recognizes important capability disparities between the United States and the other NATO nations caused by the modernization trends of the past 20 years. In *A Transformational Gap?*, Terriff, Osinga and Farrell argue that since the early 1990s, The US has been going through a Revolution in Military Affairs (RMA) with the advancement in information technologies and precision guided weapons. These advances, put to light in the first Iraqi conflict of 1991 (Operation Desert Storm), revolutionized warfare in many aspects. Targets could be hit with unprecedented precision, from greater distances and from various advanced platforms. While the Americans embraced these advances, the authors argue that the rest

of the allies did so at different times and ways, causing important capability disparities and interoperability problems.¹⁰

In *NATO's underachieving middle powers*, Brian Finley and Micheal O'Hanlon demonstrate another important modernization trend which created disparities within NATO: the ability to project military power outside of NATO's boundaries. In this 2000 essay, the authors argue that to remain relevant in a new security environment, not only did the Americans embrace technological advances, but they also started to adapt their force structure to become a more agile and deployable force capable of projecting power outside of traditional boundaries to cope with a wide range of contingencies. NATO European nations, on the contrary, possessed the equivalent of 50 percent of US expeditionary capabilities, while maintaining more people under arms. Further, they stated: "In fact, beyond their own continent, the European allies and Canada, in aggregate terms, would do well to keep up with US Marine Corps, which makes up just 12 percent of total American military strength and an even less fraction of US defense spending."¹¹ This reality was mainly due to Europe's armed forces being structured on territorial defense, but also to their lack of strategic transport assets. In the year 2000, Europe only had 10 percent of US such capabilities.¹²

The present situation has not changed much over the past decade. In a recent *The Economist* article, Charlemagne stated: "They (Europe) have more soldiers than America, but can deploy far fewer abroad. Their budgets are fragmented among lots of armies, navies and air forces. Europe produces 20 different kinds of armored vehicles, six types of attack submarines and three (types) of fighter jets. . . . European countries plainly need to find greater economies of scale."¹³

Evolution of NATO after the Cold War

The 1990s

From the Balkans to the Washington summit

The end of the Cold War brought important changes in the world security environment. The localized conventional threat transformed into a much more varied and complex one that includes terrorism, nuclear proliferation, ethnic strife and energy security. The first glimpse of this new reality quickly happened in the early 90s in the Balkans, where the different ethnic groups of Yugoslavia exploded into a dirty war for dominance following the collapse of the Soviet Union and the death of the head of State (Tito).

The international community responded with the United Nations Protection Force (UNPROFOR) in 1992, which quickly became the largest peacekeeping operation in United Nations (UN) history with a force of 38,000 from 37 countries by 1994. But its chapter VI restrictive mandate prevented it from having the right tools for the task and no US troops were involved on the ground at this stage. However, NATO was conducting naval (Operation Sharp Guard) and air (Operation Deliberate Force) operations on behalf and in support of the UN mission. It is arguably the aggressive stance and the US involvement in air strikes (two thirds of sorties) following Bosnian Serb mortar attacks on Sarajevo that steered the warring parties into the Dayton peace agreement at the end of 1995, which identified NATO as the lead organization to enforce the negotiated settlement. IFOR, for Implementation Force, thus started Operation Joint Endeavour on 16 December 1995 under a UN chapter VII operation, which meant it had more power to implement the peace settlement. All the NATO countries participated and contributed to

the mission, including an important commitment from the US. Further, 17 non-alliance nations also contributed to this NATO-led operation. These nations included Muslim countries like Egypt, Jordan and Morocco, but also a full brigade from Russia. After a year, the 60,000 strong IFOR transitioned to SFOR (Stabilization Force) with 30,000 soldiers as the situation stabilized.

The Dayton Agreement and the arrival of IFOR stabilized the situation in Croatia and Bosnia, but not in Kosovo. Considered an autonomous province of Yugoslavia, Kosovo had not been part of the Dayton Agreement and was still under the control of Serbia. An ethnic struggle followed between the Kosovar-Albanians and the Serbs, resulting in the early stages of the Kosovo war between Kosovo Liberation Army and Serbian/Yugoslav security forces. The situation worsened in 1998 and drew more attention from the international community. Reports of civilian massacres and thousands of Albanians refugees influenced NATO to act rapidly to prevent another crisis. On 24 March 1999, NATO started Operation *Allied Force*, an air bombardment of Yugoslavia, to force Serbian withdrawal from Kosovo. The air campaign lasted less than three months and was designed to destroy Yugoslav military infrastructure from high altitude. Although all NATO nations officially participated (19 at the time) in the operation, 14 countries actually contributed forces for the operation (US, Britain, France, Italy, Canada, Netherlands, Belgium, Denmark, Turkey and Germany). However, the US provided the bulk of the assets. On 10 June, Milosovic agreed to withdraw his forces from Kosovo and to let a NATO ground force (KFOR) of 30,000 soldiers secure the country on behalf of the UN (Operation Joint Guard). Today, KFOR is still securing Kosovo, although it is now a relatively small force (7,500).

When looking back at the follow-on literature on these Balkan interventions, one can observe the ongoing debate on fair contributions. In 2000, Ivo H. Daalder, who was responsible for coordinating US policy toward Bosnia as a member of the staff of the US National Security Council under Bill Clinton from 95 to 97 and is presently the US Permanent Representative to NATO,¹⁴ co-wrote a paper that states “Europe is carrying the lion’s share of the economic and military burden in the region.”¹⁵ To support his point, he argues that Europe has spent three times what the US has on nonmilitary assistance to the Balkans in the 1990s (\$17 billion vs. \$5.5 billion)¹⁶ and has contributed the majority of ground troops: “Europe has carried the vast bulk of the military burden in the Balkans during the 1990s—typically 75 percent or more—and continues to do so at the present.”¹⁷ For the specific Kosovo air campaign, he acknowledges that the US provided for most of the firepower (60 percent of combat sorties and 80 percent of precision-guided munitions), but underlines Europe’s contribution: “The allies still flew 40 percent of all combat sorties, and key countries like Italy provided bases without which the war could not have been fought.”¹⁸ His conclusion is straightforward:

By whatever measure one uses – troops as a percent of population, troops as a percent of gross domestic product, raw numbers of deployed personnel, or budgetary costs of the operation – the (European) allies not only do more, they do far more, than we do. . . . Overall we have little to complain about in the Balkans. The Europeans have been spending about three times as much as the United States for military operations and economic support over the past decade.¹⁹

When looking at the interventions in Bosnia and Kosovo from a contribution perspective, we can observe important differences. While the US generally contributed less than a third of the IFOR / SFOR troops, they provided an important majority of the assets and capacities for Operation Allied Force. More than two thirds of all type of aircrafts and the great majority of Precision Guided Munitions (PGM) used during the air

campaign were American.²⁰ Further, the allies depended immensely on American air-refueling assets. In a 2002 Air War College paper, USAF Lieutenant Colonel Michael W. Lamb Sr presented a synopsis of lessons learned. One of his main points was the important disparity in expeditionary capabilities between the US and its allies:

Operation Allied Force demonstrated that the United States and its allies have very different levels of expeditionary capability and strategic lift. The United States provided almost all of the dedicated military air and sea lift used during the air and missile campaign. It was clear that the United States had a distinct advantage in many areas of expeditionary capability.²¹

Overall, NATO's response to the Balkan crisis showed its resolve to tackle difficult security issues, but also important disparity in defense capabilities between the United States and its allies. This situation steered NATO countries toward significant changes in order not only to be able to cope with this changing security environment, but also to create the appropriate capabilities. They embarked at the start of the new century on the modernization of their forces through the guidance of the newly formed Allied Command Transformation (ACT) and various agreements during NATO summits.

The first important step of this transformation was the Defense Capabilities Initiative (DCI) of the 1999 Washington summit. The DCI was the first real attempt to change NATO's mindset to a force capable not only of local defense, but to face security challenges outside of its traditional borders and roles. In order to set the conditions, the DCI listed 59 action items separated into five core functions:²²

1. Mobility and deployability: the ability to deploy forces quickly as required, including outside NATO's borders;
2. Sustainability: the ability to maintain and supply forces abroad to enable long term operations;

3. Effective engagement: the ability to operate against any threat in the full spectrum of conflicts (low to high intensity);
4. Survivability: the ability to protect forces and infrastructure against any threat;
5. Interoperable communications: the ability to enable different countries to work effectively together by compatible command and control systems.

The DCI was an important step toward transforming NATO into a force capable of projecting power. It identified particular areas to improve, which were agreed by all. However, in order to be effective, it also required the allies to increase their spending, which they were not ready to do. Figure 2 showed that the burden gap between US and its allies actually increased from 1998 on. The DCI also lacked precise goals and was considered too broad to enable real commitments from the allies.²³

Turning the page on a new Century

NATO's expansion

Following the end of the Cold War, a parallel phenomenon was occurring to NATO's transformation: expansion of membership to include eastern European countries. The dissolution of the Soviet Union and the Warsaw pact, the weakening of Russia and the interest of eastern European countries to integrate themselves into Europe politically, economically and militarily made this expansion possible. The first round of expansion in 1999 included Hungary, Poland and the Czech Republic. This first post-Cold War expansion was debated because of the uncertain potential costs. Previous studies estimated the costs of integration to be between \$10 and \$125 billion, which was a major concern for the US Congress in particular because of worries they would have to bear the majority of these expenditures.²⁴ However, follow-on NATO and Pentagon

studies demonstrated that the first enlargement common funds costs were \$1.5 billion over 10 years, and that the next projected round of expansion would cost approximately the same with “greater benefits” to US security.²⁵ These studies paved the way for a second round of expansion in 2004 (Bulgaria, Estonia, Latvia, Lithuania, Romania, Slovakia and Slovenia) and a third round in 2009 (Albania and Croatia).²⁶

In a 2010 Congressional Research Service paper, Carl Ek reported that the addition of the new contributors to the NATO common funds reduced the share of the established members. Table 1 demonstrated that the 12 new members now account for approximately 7% of total NATO common funds expenditures. This has lead Carl Ek to conclude his research with the notions that the main NATO burden-sharing debate on expansion is not the contributions to the NATO common funds, but rather placed on:

1. The specialized capabilities that new and existing members can bring to the alliance;
2. The member nations’ willingness to contribute military assets to alliance operations, particularly Afghanistan;
3. The operational restrictions (caveats) that member states place on their national contingent.²⁷

From Washington to the Prague Summit

NATO looked to continue the momentum gained in Washington by addressing the perceived problems of the DCI through a more precise agreement established during the 2002 Prague Summit. The outcome was the Prague Capabilities Commitment (PCC), which was a major breakthrough in the alliance transformation attempt. The PCC set precise objectives on commitments and emphasized multinational cooperation and

specialization. In an attempt to close the gap with US military capabilities, European countries planned “to build a minimum of 16 large transport aircraft, increase air-to-air refueling aircraft to a pool of 10 to 15, and increase the stock of precision guided munitions by 40 percent by 2007.”²⁸ In a 2004 US Army War College paper, Lieutenant-Colonel Raymond Millen expressed skepticism in Europe’s intentions regarding the PCC. He points to the major differences in actual capabilities (US possessed at the time 265 C-5 / C-17 strategic transport airlift and 659 KC-135 / KC-10 air-to-air tankers)²⁹ and Europe’s unlikelihood to increase defense spending in the future. Hence, if any improvements are to be made in strategic airlift capabilities for instance, it will be at the expense of other types of capabilities.³⁰ Nevertheless, the seed of collaboration was planted and countries started to work closer together:

The Netherlands, for example, volunteered to lead a group of countries buying conversion kits to transform conventional bombs into PGMs. Germany managed a consortium that will acquire strategic air transport capabilities, while Spain headed a group that would lease tanker aircraft. Norway and Denmark coordinated procurement of sealift assets. The Czech Republic has concentrated on countering the effects of chemical, biological, radiological and nuclear (CBRN) weapons.³¹

But the most important items to the Prague summit were the creation of the NRF and an important restructuring of NATO’s military command. First, the NRF was a major breakthrough in transforming NATO into an integrated force capable of projecting power.

The central concept was to create, over time, an advanced, primary European force for high-intensity conflicts that would catalyze force transformation and capability acquisition in Europe, promote Transatlantic force interoperability, and provide Europe with out-of-area capabilities to match its new strategic direction and reorient NATO toward out-of-area expeditionary operations. . . . The NRF is intended to be a transformational force that will not only be able to meet the security needs of NATO in the 21st century but also serve as an agent of change whereby all the member nations of NATO will be able to

bring new technology, capabilities, and concept of operations into their national forces.³²

Intended to operate at the high-end of the full spectrum operations as the “spearhead” force, the high-readiness 25,000 personnel joint force was meant to deploy on a 5 day notice and to be fully sustainable for 30 days. The design was to integrate European ground forces with US enablers such as intelligence, surveillance and reconnaissance, and strategic airlift.³³ Unfortunately, the major requirements for Afghanistan had negative effects on the capacity to secure allied commitments. Unable to meet initial manpower goals, the 25,000 strong NRF went to a 13,000 strong Immediate Reaction Force (IRF) in 2009, with a notionally larger Response Force Pool reserve.³⁴

The composition of the IRF is now based on:

1. Brigade-sized land component (Three Battle-groups and supporting elements);
2. component (NATO’s Standing Naval Maritime Group);
3. Combat air and air support component;
4. Special forces;
5. CBRN (Chemical, biological, radiological and nuclear) defense task force.

With its initial NRF force package cut in half, the IRF cannot be expected to be able to respond to the higher end portion of the full spectrum of operations scale. In fact, since its creation, it has only been deployed in a humanitarian disaster relief role, both times in 2005: New Orleans following Hurricane Katrina and Pakistan following a major earthquake. Furthermore, in his research on NATO transformation, David Rudd underlined the employment of the NRF as one of the burden-sharing flaws : the particular country who commits forces for the 12 month stand-by period bears the full costs if the NRF is actually deployed and used. Spain, who had to deploy the bulk of the NRF to

Pakistan in 2005, understandably criticized this situation.³⁵ There appears to be no mechanism to share the costs of the employment of the NRF, which gives no incentive for countries to contribute forces. Coupled with risk aversion to commit forces in high intensity conflicts, we can easily understand that the NRF actually played a relatively minor role in NATO's affairs since its creation. Nevertheless, this situation could change with the end of the major commitments in Afghanistan in 2014 and the new emphasis on joint training expressed in the Chicago summit. Defense Secretary Leon Panetta's pledge to contribute a US-based Army brigade to the NRF is a sign that the present situation could change.

The downsizing and restructure of NATO's military command was also a significant change in mindset. From 78 major headquarters in the Cold War to 20 in the 90s, NATO downsized again to 11 major headquarters to gain efficiency and changed from a geography-based to a function-based structure in a view to transform into a more agile and leaner organization.³⁶ Allied Command Europe became responsible for all alliance operations and is now known as the Allied Command Operations. Allied Command Atlantic, based in Norfolk VA, became responsible for the transformation of NATO as the Allied Command Transformation (ACT). Both are considered strategic headquarters.

The ACT is "leading the transformation of NATO's military structure, forces, capabilities and doctrine."³⁷ Its original role was to guide the member states through the modernization of their forces. In other words, it was meant to facilitate the implementation of the various RMA innovations and interoperability between members. However, the authors of *A Transformational Gap?* raise concerns on the ACT's real

impact on NATO's transformation. Their survey on British officers, who were asked to express their perception of the ACT's influence as a crucial driver of military transformation in the United Kingdom, seem to show a limited impact.

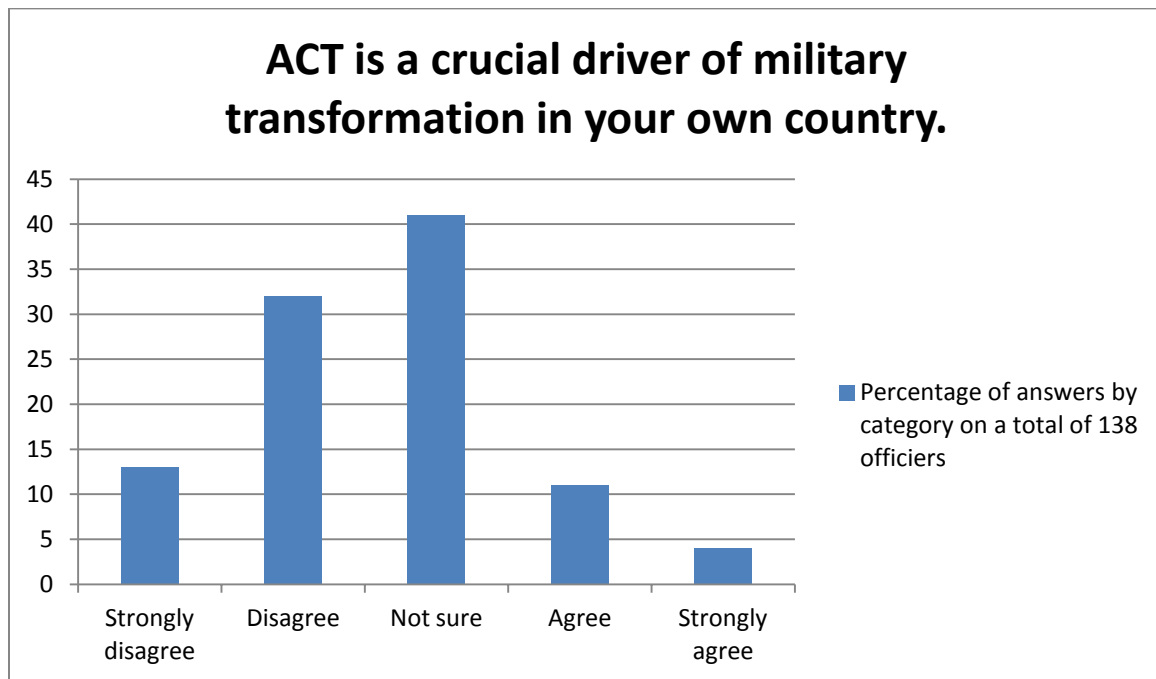


Figure 4. British officer perception on ACT as a driver of transformation

Source: Terry Terriff, Frans Osinga, and Theo Farrell, eds., *A Transformational Gap?: American Innovations and European Military Change* (Stanford, CA: Stanford University Press, 2010), 55.

During the last decade, the ACT and the NRF may not have been the transformation agent they were intended to become at the Prague summit. Nevertheless, the authors of *A Transformational Gap?* argue that they were important steps in the modernization of NATO: "NATO's streamlining of its military structure and the establishment of a response force provides the Alliance with a veritable expeditionary

capability. These reforms place NATO on the cusp of equality with the United States as a security partner, but under its current military structure, the issue of capabilities will keep it from crossing the final hurdle.”³⁸

Expansion, Transformation and Afghanistan

NATO conducted three summits between Prague (2002) and the new strategic concept of the Lisbon summit (2010): Istanbul (2004), Riga (2006) and Bucharest (2008). Each of these summits enhanced the commitments to the goals set in Prague with the PCC, but to different levels.

First, the Istanbul summit declaration reaffirmed the importance to continue the progress made in the transformation of military capabilities. To showcase this progress, the declaration specifically mentions in paragraph 21 of the Summit Declaration:³⁹

1. New PCC commitments by seven allies and special emphasis on coordinating national plans to overcome critical shortages and promote multinational projects;
2. Adoption of high-level political targets and national usability targets through the upcoming Comprehensive Political Guidance (CPG);
3. Adapting the alliance planning process to make it more responsive to operational requirements;

The declaration also mentions for the first time the intent to specialize capabilities through coordination and long term planning toward the transformation into deployable capabilities: “In some cases, nations could free up resources from no longer needed national force structures and/or capabilities and reinvest them in deployable capabilities.”⁴⁰

The Riga summit in 2006 was the stage for important endorsements and commitments through the newest CPG, “a major policy document that sets out the priorities for all alliance capability issues, planning disciplines and intelligence for the next 10 to 15 years.”⁴¹ The CPG is an operational document that supports the strategic concepts by analyzing what kind of capabilities and operations NATO could face in the probable security environment described in the Strategic Concept. In other words, it is the operational document that guides what are the capabilities required in order to achieve the strategic goals. The CPG that was agreed on in Riga was important in the sense that it clearly stipulated the specific requirement for joint expeditionary forces, including the capability to rapidly deploy and sustain such a force in the full range of military operations. It also underlined the importance of fair contributions in paragraph 8 and 12 of the agreement:

The evolving security environment requires that commitments from nations, recognizing the primacy of national political decisions, to NATO operations be translated into concrete terms by the development and fielding of flexible and sustainable contributions, and also a fair sharing of the burden.⁴²

It also requires forces that are structured, equipped, manned and trained for expeditionary operations in order to respond rapidly to emerging crisis, for which the NATO Response Force would be a key element, effectively reinforce initial entry forces, and sustain the alliance’s commitment for the duration of the operation.⁴³

But perhaps the most important political step taken by the alliance members from this agreement was the specific goals in percentage of deployable forces of paragraph 13:

On this basis, the Alliance requires sufficient fully deployable and sustainable land forces, and appropriate air and maritime components. This requirement is supported by political targets as set out by defense ministers for the portion of their nation’s land forces which are structured, prepared and equipped for deployed operations (40%) as well as the proportion undertaking or planned for sustained operations at any one time (8%), and by the Allies undertaking to

intensify their efforts, taking into account national priorities and obligations, to this end.⁴⁴

By setting deployable force structure goals in percentage, the 2006 CPG was a major breakthrough in NATO transformation. Not only did it formalize the requirement for “multinational joint expedition operations far from home territory with little or no host nation support and to sustain them for extended periods,”⁴⁵ but it stated clear objectives regarding national force structure and burden-sharing commitments to operations.

However, the declaration of the follow-on summit in Bucharest suggests that the momentum gained for NATO transformation was fading. Only three out of the 50 paragraphs of the 2008 declaration dealt with capabilities and transformation, with no new commitments. The only specific capability development effort mentioned was the requirement for strategic lift and intra-theatre airlift (mainly helicopters).⁴⁶ NATO did make some progress in that field in the following years, with two notable follow-on initiatives. First, as an interim measure until the A400M cargo airlift is delivered to European countries, a 15-nation consortium share since 2006 two Antonov AN-124 aircraft on full-time basis, two on a six day notice and another pair on nine day notice.⁴⁷ The second initiative is a Norwegian led nine-nation similar arrangement for roll-on/roll-off vessels. These arrangements are a token of the importance to “pool” expensive resources that enable projecting and maintaining forces on long distances for a long period of time.

Although building new and adapted capabilities remained an important aspect of these three summits, one can imagine that NATO transformation was getting overshadowed by the Afghanistan issue, which was becoming more and more important

as the International Security for Afghanistan Force (ISAF) expanded the troop requirement during that timeframe. Indeed, from the start of the ISAF mission in 2001 in the region of Kabul through the next decade, ISAF grew to become a major operation of more than 100,000 troops that expanded to the whole country. The majority of the contributing countries are within NATO, but there are other nations also contributing outside of NATO, like Georgia, Australia and El Salvador. Today, according to the official NATO web site, there are 50 contributing countries to the mission.⁴⁸

The US has contributed the bulk of the force since the early stages. After all, before the start of ISAF in December 2001, the US had strongly supported the overthrow of the Taliban regime following the 9/11 attacks in New York and had strong interests in a stable Afghanistan. NATO got involved in 2003 once it was apparent that a nation-building effort was necessary, but throughout the more than a decade long mission, the US contributed more than half of the troop total. The appetite from European countries for resources and troops contribution was clearly minimal, which prompted US Secretary of Defense Gates to question the future of NATO in Germany in October 2007:

If an alliance of the world's greatest democracies cannot summon the will to get the job done in a mission that we agree is morally just and vital to our security, then our citizens may begin to question both the worth of the mission and the utility of the 60-year old trans-Atlantic security project itself.⁴⁹

However, the request for more resources and troops remained in large part unanswered. That proportion of US troops versus the rest of NATO Nations grew even bigger after 2009, to approximately 70 percent, when President Obama reinforced the Afghan theatre of operation with more than 30,000 additional troops.⁵⁰ But troop contribution was not the only burden-sharing issue related to the Afghanistan commitment. In a 2010 RAND (Research and Development) monograph, Andrew R.

Hoehn and Sarah Harting point to a new issue brought up by the dangerous nature of the Afghan intervention: the sharing of the risks. Indeed, for the first time in its history, NATO nations were suffering considerable casualties, which were happening at different rates and ratios depending on the area of operation. For instance, some of the countries like Canada and the United Kingdom (UK) were suffering heavier casualties related to their total force size (see figure 5) because of their geographic locations and their willingness to contribute to combat operations. Hence, like the authors point out in the RAND report, “NATO has been forced to confront not only who shares what burdens but who shares what risks.”⁵¹

This situation was further enhanced by the limits imposed on some of the participating nation’s armed forces. In fact, approximately half (the proportion changes through time) of the contributing nations imposed caveats on their national troops deployed with ISAF, which significantly limited their capacity to operate against insurgents.⁵² These caveats and the perception of unfair risk-sharing resulted in profound cleavages in the alliance:

These cleavages came clearly to the fore as American, British, Canadian, and Dutch leaders, while answering to their own publics, began calling for other NATO partners to share more in NATO’s risks in Afghanistan. Much of the initial frustration was heaped on Germany, with calls for German forces to take on greater roles in Afghanistan, including fighting roles, and sparking an intense political debate in Germany itself.⁵³

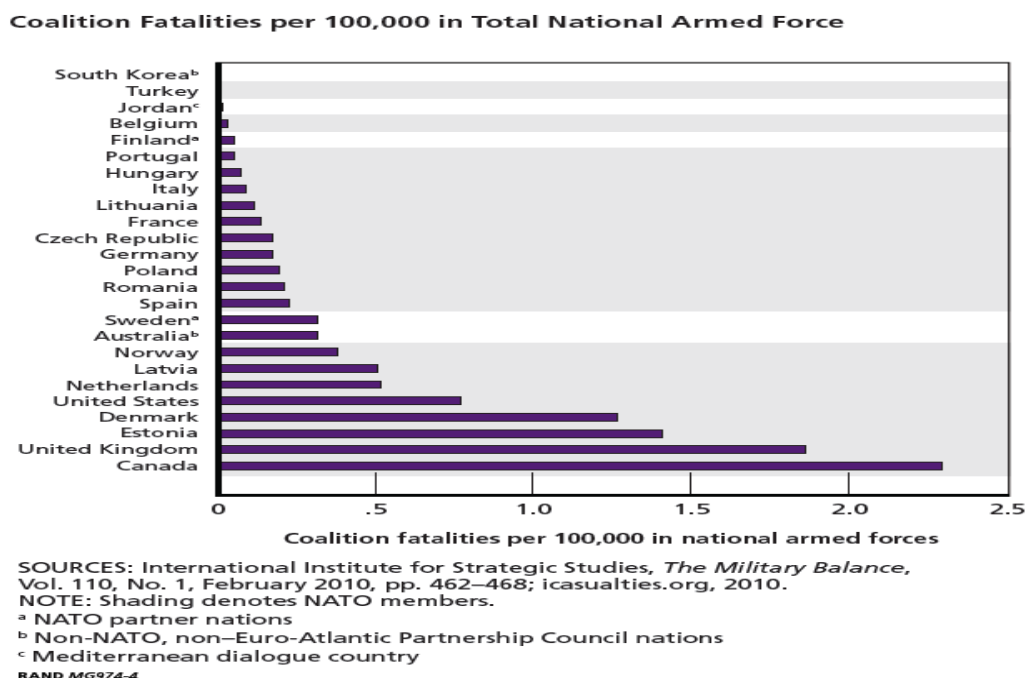


Figure 5. Coalition Fatalities per 100,000 in total National Armed Forces

Source: Andrew R. Hoehn and Sarah Harting, “Risking NATO: Testing the Limits of the Alliance in Afghanistan” (Monograph, RAND Corporation, Santa Monica, CA, 2010), 51.

While continuing its mission in Afghanistan, NATO conducted another important military intervention in Libya in 2011. This mission, called Operation Unified Protector, was essentially an air-based campaign aimed at protecting civilians from governmental repression under UN resolution 1970.⁵⁴ Although the operation was deemed successful from the positive outcome in a respectable timeframe (roughly 6 months), it showed once again the inability of the alliance to act without US critical enablers and armament supply.⁵⁵ Although the political leadership of the intervention came from France and Britain, the intervention clearly showed once again its difficulties to project power outside its borders without the help of the US. In a tough editorial position on European real contribution to the Libya intervention and for the overall burden-sharing, the New

York Times argued on 18 April 2012 that European militaries are unable to conduct sustained air operations of their own, even at a close distance. To prove their point, the editorial demonstrates that the US had to provide critical assets like specialized aircraft, intelligence personnel to identify targets and precision guided munitions. They point to military expenditures as a reason, but also at how European nations are structured, for the clear lack of capabilities:

The operational failures in Libya grow directly out of Europe's chronic military underinvestment and out-of-date strategic priorities. Most European allies failed to invest adequately in military modernization when budgets were flush. And too much of what Europe did spend went to vanity projects like the independent nuclear deterrents maintained by Britain and France. Too little has been spent preparing for more realistic security challenges like combating transnational terrorist networks and deflecting the rampages of cornered dictators, like Qaddafi and, a decade before that, Slobodan Milosevic of Serbia. Military force is not always the best answer. But, when it is, Europe must be able to provide its share.⁵⁶

Ironically, as stated by Jamie Shea in a recent article, “most of these deficiencies were already evident during NATO’s Allied Force campaign over Kosovo in 1999.”⁵⁷

The two cartoons below, made during the Libya intervention, illustrate the ongoing lack of capabilities from the allies without strong US backing.



Figure 6. European lack of military power

Source: Jordan Becker, "Pillar or Pole? NATO, CSPD, and the Transatlantic Relationship," *The Atlantic Community*, http://www.atlantic-community.org/index/Open_Think_Tank/Pillar_or_Pole%3F_NATO%2C_CSPD%2C_and_the_Transatlantic_Relationship (accessed 8 October 2012), 39.

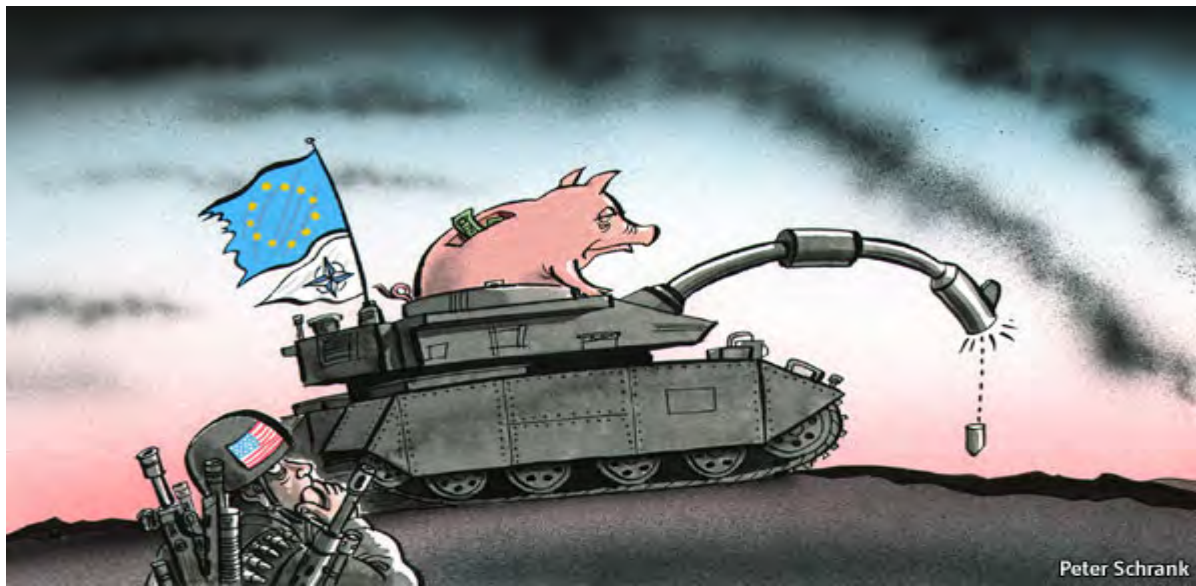


Figure 7. European lack of military power, part 2

Source: Peter Schrank, "On Target," *The Economist*, June 2011, <http://www.economist.com/node/18836734> (accessed 19 September 2012).

NDPP and Smart Defense: NATO's Newest Initiatives to Plan and Coordinate Better

The mission in Afghanistan exposed serious weaknesses for NATO's ability to project military power at great distances. It was becoming evident that NATO needed a more precise tool to be able plan and coordinate its capabilities better in regards to these types of requirements in particular. At the end of the decade, the Alliance defense ministers agreed in 2009 to use a new planning tool, the NATO Defense Planning Process (NDPP).⁵⁸ The aforementioned intervention in Libya in 2011 reinforced the necessity to plan and coordinate better in face of the security environment of the new century.

The NDPP is “a structured . . . process which uses analytical tools and relevant NATO experts analysis to identify the single set of capabilities considered necessary to meet the Alliance's ambitions.”⁵⁹ In other words, it is a planning process that attempts to fuse the “ends-ways-means” of the Alliance in a scientific manner. This process is divided in 13 planning domains (armament, C3, force, logistics, resources, civil emergency, nuclear, air defense, air traffic management, intelligence, military medical, research and technology, and lastly standardization) and uses five steps:

1. Establish political guidance (Ends);
2. requirements (Ways);
3. Apportion requirements and set targets (Means);
4. implementation;
5. Review results.

The first step of this planning cycle was to establish a new political guidance. NATO usually issues a new strategic concept every decade, and the last one dated from

1999 in Washington. Since then, many important events changed the world's security environment, like 9/11 and many long term conflicts. The new concept was not only due, it had become necessary. NATO revealed it at the 2010 Lisbon summit. This new strategic concept clearly identified crisis management and cooperative security beyond its borders as two supplemental essential core tasks to article 5 collective defense. To be able to do that, it specifies NATO "will engage in a continuous process of reform, modernization and transformation."⁶⁰ It also identified unconventional threats to the new security environment such as terrorism, weapons of mass destruction and cyber-attacks. As such, the allies' leadership agreed to a missile defense system in cooperation with the Russians. The Afghanistan issue was also addressed with the clear intention for the passage of responsibility for security to Afghan control by 2014. The new concept did not address, per se, the capability and burden-sharing issue, but it confirmed NATO's need to continue transforming into a projecting capable force if it wants to be able to face tomorrow's threats. As such, the political guidance of March 2011 that followed the strategic concept identified many specific tasks to address the core tasks, among them:

1. Maintain the ability to sustain concurrent major joint operations and several smaller operations for collective defense and crisis response, including at strategic distance.
2. and maintain robust, mobile and deployable conventional forces to carry out both our article 5 responsibilities and the Alliance's expeditionary operations, including with the NRF.⁶¹

The ACT was assigned to address step 2 and 3 of the NDPP, which is to identify the requirements needed to accomplish the tasks from the political guidance (step 2) and

recommend capability targets to the members (step 3). Step 2 was completed in the fall of 2011.⁶² But before continuing to step 3, a comparison between the required and existing capabilities was completed at the end of 2011. According to Lieutenant Colonel Gerry Conrad of the Defense Planning Branch, consultation with each NATO nation is under way to formulate the capability targets.

In the meantime, in order to address the vast objectives set by the new strategic concept in difficult economic times and to give new life to its ongoing transformation, NATO Secretary General Anders Fogh Rasmussen called for a new concept in 2011: *Smart Defense*. This approach intends to “pool and share capabilities, to set the right priorities, and to better coordinate our efforts.”⁶³ He sees NATO as the “honest broker” that can coordinate between allies to enable better efficiency through shared capabilities. Through this initiative, NATO will align its capability priorities with those of its members, promote cooperation in the development and acquisition of capabilities and recommend specialization areas to capitalize on nation’s strengths.⁶⁴

The Chicago Summit

At the recent NATO Chicago summit in May 2012, Secretary-General Rasmussen clearly stated the importance of a new vision on capability management by making it one of the three pillars of the summit, along with Afghanistan and international cooperation. In a *Summit Declaration on Defense Capabilities: Toward NATO Forces 2020*, he exposed how NATO intends to address this challenge in the future through Smart-- the heart of this approach--and with other initiatives like Connected Forces Initiative (enhanced collaborative training, linking networks and command structures, cooperation

between special forces, etc.) and a new Defense Package (develop and deliver the capabilities that our missions and operations require through NDPP).

To show the progress that has already been done on this subject, the Secretary General made public during the summit recently developed international projects related to Smart Defense. These projects are coordinated by a lead nation and have several participating countries. They have the intent to pool capabilities in a way to enhance efficiency and lower the overall costs. They are classified into short, medium and long term projects. Here are the short term projects that were announced in Chicago:⁶⁵

1. Maritime patrol aircraft (Germany);
2. Road clearance equipment to counter Improvised Explosive Devices (IED) (Italy);
3. Universal armament interface (Canada);
4. Precision-guided munitions sharing (Denmark);
5. Multinational helicopter training (Czech Republic);
6. Theatre opening capability (Great Britain);
7. Multinational field hospital with different national modules (France).

Intentions for medium and long term projects were also expressed regarding joint acquisition of air surveillance radar, counter-IED jamming, joint acquisition of Smart L radars, strategic-level ballistic missile defense and building a permanent joint Intelligence, Surveillance and Reconnaissance (ISR) architecture for individual countries to plug and play into it with future systems.⁶⁶ Expanding air policing is also looked at carefully. This type of activity has been ongoing with relative success in the Baltic States

since they joined NATO since 2008 in order to prevent them from having to purchase expansive aircrafts.

Most of the literature on NATO recognizes the urgency to pool, share and coordinate assets better to be able to cope with contemporary security threats and shrinking military budgets. In an article leading to the Chicago summit (“NATO’s ordinary future”), Robert D. Kaplan expressed the urgency for the allies to change in order to do more with less and minimize their reliance on US capabilities to intervene. For him--and for--Smart Defense is a step in the right direction. In a recent School of Advance Military Study (SAMS) monograph titled “Operational implications of the NATO Strategic concept 2010 for European countries in NATO and the EU,” Major Andreas C. Winter of the German Army argues for better European cooperation in defense spending (through the European Defense Agency) and for enhanced tactical military training in order to ensure more efficiency and interoperability within the alliance.

However, some of the literature questions whether Smart Defense is the breakthrough solution or simply recycling past concepts. In a viral critique published in Foreign Policy magazine, Stephen M. Walt, a Harvard University professor of international relations, described the Chicago Summit as a “useless waste of time” and a “subtle insult to our collective intelligence.”⁶⁷ He even paraphrased Churchill in stating that “never have so many world leaders flown so far to accomplish so little.”⁶⁸ To demonstrate his point, he associated the summit agreement on ending the war in Afghanistan as “acknowledging a foregone conclusion” rather than a breakthrough or a

significant milestone, and pointed to NATO's European members' more than 50 year old pattern to improve capabilities:

NATO has piously declared--for the zillionth time--that its members will enhance their military capabilities by improved intra-alliance cooperation. . . . How many times have we seen this movie? Ever since the 1952 Lisbon force goals, NATO's European members have promised to improve their capabilities and then failed to meet their agreed-upon goals. This pattern has continued for five-plus decades, and it makes you wonder why anyone takes such pledges seriously anymore.⁶⁹

Whet Moser of the Chicago magazine, expressed similar doubts by associating NATO's newest initiative as an advertisement campaign: "Advertise a cheap, efficient product compatible with many existing services. And brand it "smart" (that's "smart" as in "smart phone"). Welcome to Smart Defense, item two on the NATO summit agenda: cheap defense for an austere world."⁷⁰

In a more nuanced article titled "NATO's 2012 Chicago summit: a chance to ignore the issues once again?," Andrew M. Dorman praises NATO's attempt to move toward greater cooperation, but questions whether it will be yet again empty promises, like the agreed 2 percent of GDP in defense spending. He argues that throughout its history, NATO has always had important disagreement among its members in regards to the role of the alliance and the operations it should be conducting. Specializing *niches* requires a high level of cooperation and mutual agreement, which has not been the norm for NATO nations.

Furthermore, in a *Wall Street Journal* article, Patrick Keller and Gary Schmitt demonstrate important skepticism by arguing:

Moreover, the "Smart Defense" initiative lacks the necessary political foundations. The effectiveness of pooled and shared capabilities depends on a common view about potential threats, with the accompanying certainty that political leaders across NATO capitals will be in agreement on when and how to

use armed force. As the Libya mission showed last year, the alliance is far from such a consensus.⁷¹

On a more positive note, in a *Reuters* article entitled “How NATO can Revitalize its Role,” President of the Atlantic Council Frederick Kempe praises NATO’s attempt during the summit to deepen the partnership approach not only within NATO’s membership, but also to outer democracies like Japan and Australia: “NATO’s efforts to broaden and deepen cooperation with capable partner nations (during the summit) can be rolled out as a pro-active, forward looking initiative that has NATO going on offense for a new era.”⁷²

In conclusion, a rapid scan of the literature following the Chicago summit demonstrates skepticism on the outcomes and the real implications to NATO nations, particularly in regards to the Smart Defense initiative. For NATO’s brass, the Chicago summit is the start of a new era of cooperation and efficiency. However promising, the newest set of promises and agreements have led the scholars and commentators to remain skeptical for the most part.

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⁸David Rudd, *NATO Transformation and Operational Support in the Canadian Forces, Part 1* (Ottawa, ON: Defence R&D Canada, Strategic Analysis section, 2010), 5.

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¹³The Economist, “On Target.”

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¹⁵Daalder and O’Hanlon, “The United States in the Balkans: There to Stay,” *The Washington Quarterly* (Autumn 2000): 158.

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¹⁷*Ibid.*

¹⁸*Ibid.*, 168.

¹⁹*Ibid.*, 167-168.

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²³Ek, *NATO Common Funds Burden-sharing* (2008).

²⁴*Ibid.*, 6.

²⁵Ek, *NATO Common Funds Burden-sharing* (2010), 6.

²⁶North Atlantic Treaty Organization, “NATO Enlargement,” http://www.nato.int/cps/en/natolive/topics_49212.html (accessed 8 October 2012).

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²⁸Lt COL Raymond Millen, “Reconfiguring NATO for future security challenges,” *Comparative Strategy* 23 (2004): 126.

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³⁰*Ibid.*

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³⁴David Rudd, *NATO Transformation and operational support in the Canadian Forces part 2* (Ottawa, ON: Defence R&D Canada, Strategic Analysis section, 2010), 14.

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CHAPTER 3

RESEARCH METHODOLOGY

The purpose of the previous chapter was to provide an overview of the related literature and paint a picture of the situation by reviewing NATO's evolution since the end of the Cold War. The literature identifies disparity issues between the US and the rest of the alliance nations in military capabilities and in contributions to NATO-run operations. These disparities are largely due to major differences in military budgets, allocated resources and national policies, but the literature also points to the organizational structures of NATO nations and their willingness to deploy national troops to explain these important differences.

These disparities have existed since the creation of NATO and increased or diminished over time. After the end of the Cold War, the gap was slowly shrinking as European allies significantly contributed to the large-scale operation in Bosnia and relatively increased their share of total military expenditures. But that trend changed again at the turn of the new century. As the capability-gap began to rise again, scholars and writers began questioning the relevancy and efficiency of an alliance that has to cope with members that contribute little or possesses out-dated capabilities. The old debate for a more balanced and fair "sharing of the burden" would reappear, once again.

The second part of chapter 2 demonstrated that NATO is attempting to remedy the situation by adapting to the contemporary context and transforming into a modern alliance that can generate more relevant capabilities and fair contributions. Through various Summits, the allies have pledged their adherence to that transformation and committed themselves to building, maintaining and using more modern capabilities.

However, in the face of harsh economic times and the normal temptation to “free-ride”, the overall perception coming out of the literature is that commitments have not always been respected. As a result, NATO not only suffers from a capability-gap, but also from a credibility stand point as well. This reality is reflected in the recent literature: most articles and papers were pessimistic about the Chicago Summit, which was supposed to officially launch the Smart Defense initiative, the latest important transformation attempt. There seems to be a generalized skepticism about NATO, largely caused by the members’ inability to follow through with their promises and commitments.

Given these circumstances, this study argues that NATO’s main challenge is, and will remain, to find the best ways to generate fair contribution and relevant capabilities in order to maintain its military power and ensure its efficiency going forward. Prior to answering this question, many secondary questions need to be addressed in order to set the conditions for a proper analysis. The first step will be to identify what capability requirements came out of NATO’s military interventions of the 1990s and what related commitments were made during the follow-on NATO summits. This will set the stage for the comparison of these requirements and commitments to actual capabilities acquired or maintained by NATO nations since 2000. The aim of this comparison is to identify precise key capability shortfalls that still remain, despite the commitments. Furthermore, to have a truly comprehensive approach, the study needs to take into account the changing operational and strategic context of the last decade. Hence, a review of the important recent trends will follow the comparison and pave the way for my conclusions. Using qualitative analysis based on quantitative data, six secondary questions will be answered in the next chapter:

1. What capability requirements NATO military interventions have shown in the 1990s?
2. What commitments resulted from NATO summits and strategic guidance since the Washington summit in 1999?
3. How did NATO nation's military capability building evolve in the past decade to adapt to commitments and previous shortfalls?
4. What capability challenges still remain today?
5. What contextual trends will affect NATO's capability building in the future?
6. How does NATO intend to address its capability challenges?

The sequence of the questions is meant to act as building blocks: by identifying and comparing shortfalls, commitments, and real capabilities, the study will make key deductions that will consider the operational and strategic context. The sixth question is meant to identify NATO's latest initiatives, which are to be considered in my conclusions. A graphic representation of this research plan is at appendix A following chapter 5.

CHAPTER 4

ANALYSIS

Introduction

This chapter will answer the six secondary questions mentioned above in order to make key deductions that will ultimately help the author to answer the primary question. It will identify and compare relevant information on to what has happened, what should have happened, what did happen and what is happening. This will give some light onto possible recommendations that take into account present circumstances.

The Requirements

Throughout the 1990s, NATO conducted various operations in the Balkan region. The alliance actually conducted its first ever out-of-area operation in Bosnia in support of the UN peacekeeping effort from 1993 to 1995, and then as the lead organization from 1995 to 2004 in a major land-centric operation. Simultaneously, NATO conducted another major operation in a neighboring country (Kosovo) from 1999 to the present. These two operations characterized NATO's first decade after the Cold War and inspired to a certain extent the capability commitments made during the Summits of the next decade. There was also another important military intervention conducted in the early 1990s that impacted the eventual NATO capability transformation: the Gulf War of 1990-1991, otherwise known as Operation Desert Storm.

This operation was not conducted by NATO per se, but included all the major partners of NATO (US, France, UK) and was supported by smaller partners like Spain, Canada and Italy. While the Balkan region conflicts necessitated a peace-imposing and

keeping force, the Gulf War was a high-intensity combat theatre of operation. This conflict would become an important step in NATO's transformation because it displayed new technologies that would revolutionize warfare. The most obvious one was the increase precision and lethality delivered by the improved airframes and air armament, mostly Precision Guided Missiles (PGMs).¹ But two other less obvious new capabilities were deemed as important contributors to the success of the operation: surveillance - sensor capabilities and communication systems that permitted greatly improved exchange of information data.² According to the authors of *A Transformation Gap?*, these three capabilities revolutionized warfare to the point that the Gulf War should be considered the "mother of NATO transformation."³

As discussed earlier, the follow-on NATO-led interventions in the Balkan region were peacekeeping operations, hence less intensive on the spectrum of armed conflicts. However, the capabilities displayed in the Gulf War would prove their importance once again in these less-intensive theatres of operations. Improved lethality and precision of armaments, surveillance systems and information superiority would all prove very important. But the Bosnia and Kosovo interventions also demonstrated other important capabilities required by NATO to face its future.

First, contrary to the Gulf War, these interventions required long term commitments, which mean sustaining a sizeable force for extended periods. Second, the varied and wide force composition of these interventions required national expeditionary capabilities to conduct out-of-country deployments, which was a first for some of these countries. Third, it required an interoperable force, capable of communicating together and acting in unity.

These interventions also brought forward the capability commitment levels for fair burden-sharing contributions. The land-based contributions for the Bosnia intervention could be considered fair in the sense that they are somewhat similar to the percentage of the burden-sharing agreements for NATO budgets presented in table 1 from chapter 2. From the start, this intervention had strong wide-range political backing from a UN resolution and the geographic proximity with NATO European members, which led to contributions from all member countries, as well as non-members nations (see table 2).

Table 2. Troop contribution to IFOR/SFOR from NATO and non-NATO countries (*)				
COUNTRY	IFOR (1995)	PERCENT	SFOR (2002)	PERCENT
AUSTRIA	100	0.2	10	0.1
BELGIUM	300	0.6	10	0.1
BULGARIA	0	0	190	1
CANADA	1,250	2.4	1,500	8.3
CZECH REPUBLIC	800	1.5	20	0.1
DENMARK	800	1.5	330	1.8
FINLAND	850	1.6	100	0.5
FRANCE	10,000	19.2	2,280	12.7
GERMANY	4,000	7.7	1,720	9.5
GREECE	1000	1.9	120	0.7
HUNGARY	130	0.2	130	0.7
ITALY	2,100	4	1,370	7.6
LUXEMBOURG	300	0.6	0	0
NETHERLANDS	2,000	3.8	1,440	8
NORWAY	750	1.4	20	0.1
POLAND	800	1.5	280	1.5
PORTUGAL	900	1.7	360	2
ROMANIA	150	0.3	150	0.8
SPAIN	1,500	2.9	1,210	6.7
TURKEY	1,200	2.3	760	4.2
UNITED KINGDOM	13,000	25	1,890	10.5
UNITED STATES	16,500	31.7	3,100	17.2
RUSSIA*	2,000	3.8	640	3.5
UKRAINE*	100	0.2	0	0
SWEDEN*	1,000	1.9	30	0.1
EGYPT*	800	1.5	0	0
MOROCCO*	650	1.2	270	1.5
MALAYSIA*	750	1.4	0	0
TOTAL	52,000	100	18,000	100

Source: Created by author with data extracted from: Office of the Assistant Secretary of Defense for Public Affairs, “The Multinational IFOR Coalition Participation Fact Sheet,” <http://www.dtic.mil/bosnia/fs/multinat.html> (accessed 21 October 2012).

The Bosnian territory was divided into three multinational division area of operations, each led by one of the main contributing countries (US, UK, and France). These three leading countries contributed each at a level between 20 and 30 percent of the total force, while other “middle powers” contributed between two and five percent. Although this operation lasted for more than a decade, it can be considered a success for the simple fact that it successfully implemented the Dayton peace accords and stabilized the situation without any major violence from the different factions. It was also the first NATO large-scale military operation conducted since the end of the Cold War, which in itself is a success. Nevertheless, it showed a growing gap in technological differences between the nations of the alliance, weaknesses in allies’ interoperability and insufficient expeditionary capabilities.⁴

The Kosovo intervention, although smaller in scale, was similar in scope, in length and in capability requirements. Nonetheless, the main difference was that the land-centric operation of this intervention required a significant air campaign to set the conditions for a safer deployment of land troops. This air campaign (Operation Allied Force) showed capability requirements closer to the ones of the Gulf War: the need for stealth airframes, PGMs and reliable intelligence collecting in order to deliver efficiently the PGMs. The other important difference was in the level of contributions. While the overall average proportion of US ground troops in the Balkans was in the realm of 25 percent of land-centric contributions, the US contributed 60 percent of air combat sorties and 80 percent of dropped PGM for this particular operation.⁵ The US also provided the very large bulk of support aircrafts, like air-refueling for instance, and Suppression of Enemy Air Defense (SEAD) missions.⁶ A French Senate study on French capabilities

related to this particular operation showed similar lessons: an important lack in PGMs and air-to-air refuel aircraft, as well as in intelligence capabilities.⁷

Table 3 is a recapitulation of what could be considered important capability requirements or deficiencies of the interventions of the 1990s.

Table 3. Capability requirements shown from major interventions of the 1990s			
Conflict / Intervention	Operation	Main component	Underlined the importance of:
Gulf War	Desert Storm	Air + Land	-PGMs -Stealth aircrafts + SEAD capabilities -Surveillance assets -Information superiority
Bosnia (IFOR/SFOR) Kosovo (KFOR)	Joint Endeavor Joint Guard Joint Enterprise	Land	-Varied and fair troop contributions -Expeditionary capabilities -Long term sustainment -Multinational interoperability
Kosovo	Allied Force	Air	-PGMs -Stealth aircrafts + SEAD capabilities -Support aircrafts -Surveillance / intelligence assets -Information superiority -Strong US involvement + contribution of specific capabilities

Source: Created by author.

The Commitments

NATO nation's capability commitments are usually made during NATO summits, which are normally conducted every two years. It is during those summits that the alliance nations officially commit themselves to common policies, strategies and various agreements. At the end of every summit, a declaration is published. These declarations are written in broad terms and usually contain general information on various subjects of

agreement, such as the alliance future orientations, new policies, state of present operations, new priorities, and commitments. When a subject in specific requires more attention or precision, a parallel document is produced, which could be seen as an annex to the declaration. Most of the summits included such documents, and some of them are related to capability building.

Since the Washington Summit in 1999, capability commitments have been a part of this summit declaration to various degrees. Sometimes, they took precedence, while sometimes they were only mentioned in one or two paragraphs out of more than 50. Chapter 2 showed that NATO conducted summits in Prague (2002), Istanbul (2004), Riga (2006), Bucharest (2008), Lisbon (2010) and Chicago (2012) since the 1999 Washington Summit. The following table is a summary of the capability commitments highlights produced during these summits:

Table 4. NATO Summits recapitulation		
Summit	Declared commitments related to capabilities	Outcome
Washington 1999	Pledge to improve defense capabilities to fulfill full range of the Alliance 21 st century missions (para 7), including out-of-area operations	DCI – Defense Capability Initiative Program to develop allied defense capabilities in 5 areas: <ul style="list-style-type: none"> - Effective engagement - Deployability + mobility - Sustainability + logistics - Survivability - Command, control, communication
Prague 2002	Provide balanced and effective capabilities within the Alliance so NATO can better carry out the full range of its mission (para 3)	PCC – Prague Capabilities Commitment Provides clear objectives for improvement and development of new military capabilities for modern warfare in high threat environments. Eight areas:

		<ul style="list-style-type: none"> - CBRN - Intel, surv, recon, target ac (ISTAR) - Air-ground surveillance - Command, control, communication - Combat effectiveness (PGM) - Strategic air/sea lift - Air-to-air refueling - Deployable combat support service
Istanbul 2004	Give further shape and direction to transformation efforts in order to adapt capabilities to 21 st century challenges (para 2)	Introduces the concept of individual national usability targets (without setting formal goals).
Riga 2006	Build on commitments made in the two previous summits and link capabilities to new Comprehensive Political Guidance (CPG) (para 22)	<p>CPG: major policy document that sets the new threat environment, new requirements and priorities for capabilities.</p> <ul style="list-style-type: none"> - Requirements: Expeditionary forces able to carry out greater number and scope of smaller operations - Level of Ambition (LoA): NATO prepares to conduct simultaneously for 2 Major Joint Operations (MJO) and 6 Small Joint Operations (SJO) - Deployability: sets goal of 8 and 40 percent of deployable forces - Priorities: <ul style="list-style-type: none"> o Joint expeditionary forces o High-readiness forces o Asymmetric threat o Information superiority o Comprehensive approach
Bucharest 2008	Continue transformation efforts within the scope of the CPG and evolving security challenges (para 44)	<p>-No formal commitments</p> <p>-Intentions to improve strategic air lift and intra-theatre airlift (mainly helicopters)</p> <p>-Continue to improve network capabilities</p> <p>-Summit with smallest contribution to capability commitments</p>

Lisbon 2010	Continue transformation efforts in order to provide the right capabilities for the full range of missions in difficult economic times (para 44)	-Strategic concept: gives precision on new threat environment and NATO core missions, but no real capability commitments -New priorities for capabilities: <ul style="list-style-type: none"> - Ongoing missions requirements - New capabilities: missile defense and cyber-attack - Key enabling capabilities (ISTAR, C3, etc.)
Chicago 2012	Commitment to maintain appropriate mixture of nuclear, conventional and missile defense capabilities	Declaration on Defense Capabilities: Toward NATO forces 2020 <ul style="list-style-type: none"> - Smart defense <ul style="list-style-type: none"> o Align nations' priorities to NATO's priorities o Effective cooperation o Specialization - Connected Forces initiative <ul style="list-style-type: none"> o Interoperability o Enhanced collective training

Source: Created by author.

The Washington Summit was the start of what would be known as NATO transformation, which essentially consists of aligning and adapting capabilities to the new requirements of the geo-political context of 21st century. As stated in the first paragraph of the 1999 summit declaration, “the world has changed dramatically over the last half century.”⁸ The end of the Cold War era produced a new set of conditions that required an important adaptation of the military structures if they were to remain relevant. From a large-scale conventional threat, NATO’s concerns widened like light through a prism to create an unstable and uncertain world.

This new “state of affairs” was captured in the 1999 Strategic Concept, the most important contribution of the Washington Summit, and in the Summit Declaration itself. Generally reviewed every decade, the Strategic Concepts are the ultimate guide to requirements. They are the “end” of the “end, ways and means” relationship. The 1999 version adopted in Washington was a clean break from its predecessor in the sense that it clearly identified the potential need to conduct “out-of-area” operations for various reasons, from humanitarian aid to conflict prevention and crisis management. In that spirit, paragraph 52 stipulated that Alliance military forces are to be postured, in addition to be prepared for collective defense, “to conduct crisis response operations, sometimes at short notice, distant from their home stations, including beyond the Allies’ territory.”⁹ The interventions in Bosnia and Kosovo were to be good indications of future requirements to prepare for security contingencies with quick and sustainable deployments, most likely outside of NATO’s boundaries.

The Washington Summit was also the stage for the DCI, another important step of this transformation. Chapter 2 of this research described in detail the characteristics of the DCI, the commitments taken on the identified “areas of improvement” and why it eventually failed. In this context, perhaps the greatest achievement of the DCI would be to formalize the need to adapt and improve on specified capabilities to ensure the effectiveness of future multinational operations.¹⁰ Recognizing that “many Allies have only relatively limited capabilities for the rapid deployment of significant forces outside national territory, or for extended sustainment of operations and protection of forces far from home bases,”¹¹ the DCI aimed to address the requirement for deployable, sustainable and interoperable multinational forces.

The following summit in Prague would build-on these intentions to enhance the alliance's capabilities. In the first paragraph of the Summit declaration, the allies took the engagement "to transform NATO with new members, new capabilities and new relationships with our partners."¹² In that sense, the PCC was intended as a formal agreement on specific political commitments to improve capabilities, in particular areas such as strategic airlift, precision guided munitions and air-to-air refueling. Seen as an upgrade from the DCI, the PCC had more precise commitment goals and required the allies to provide back brief information on how the commitments are implemented.¹³ It also emphasized multinational cooperation, pooling of funds and recognized the value of role specialization.¹⁴ In that sense, it was the true ancestor to the recent Smart Defense initiative.

The following summits confirmed NATO's intentions to continue with its transformation process through the PCC. The most important inject until the new strategic concept of 2010 was the 2006 CPG, which followed a June 2006 agreement between the defense ministers of the alliance nations on a new "Level of Ambition" (LoA) where NATO is required to be prepared to conduct simultaneously two Major Joint Operations (MJO) and up to six Small Joint Operations (SJO).¹⁵ The CPG stressed the importance of building of joint expeditionary forces that are agile, deployable, sustainable and interoperable.¹⁶ As such, it formalized the necessity to remain flexible in front of uncertain threats:

In order to undertake the full range of missions, the Alliance must have the capability to launch and sustain concurrent major joint operations and smaller operations for collective defense and crisis response on and beyond Alliance territory, on its periphery, and at strategic distance; it is likely that NATO will need to carry out a greater number of smaller demanding and different operations,

and the Alliance must retain the capability to conduct large-scale high-intensity operations.¹⁷

The 2006 CPG guidance, in shifting NATO's LOA from one large deployment to concurrent smaller operations, "seems to confirm that future threats are less likely to involve large-scale war in Europe, but rather small-scale deployments for stabilization, peacekeeping, and humanitarian assistance."¹⁸ However, the 2006 ministerial guidance and CPG did not precisely formalize what "major" and "smaller" operations consist of, nor did they provide clear guidance on how to prepare for these types of operations. Nevertheless, the CPG was an important document because it confirmed the requirement to transform into more deployable force in the view of its new LoA and identified specific proportions of ground forces goals that all allies should make available for deployment, regardless of nationality:

1. A minimum of 8 percent of troops undertaking or planned for sustained operations at any one time;
2. A minimum of 40 percent structured, prepared and equipped for deployed operations.¹⁹

The Lisbon Summit of 2010 was the stage for the publication of the new strategic concept. The concept formalized the alliance core tasks (collective defense, crisis management and cooperative security) and the new threat environment, which emphasized the new threats of nuclear ballistic missiles proliferation and cyber-attacks. As such, new capabilities to deal with those threats have been included in the capability priorities set in the summit declaration:

1. Ongoing operations requirements (mainly Afghanistan);
2. Current, evolving and emerging challenges requirements (to include missile defense and cyber-attack defense);
3. Key enabling capabilities requirements (information superiority, interoperability, etc.).²⁰

The 2012 Chicago Summit was the latest stage of the evolution of capability commitments. Although capability building aspect was widely advertised before the summit, it undeniably took a backseat to the Afghanistan situation in the summit declaration. However, an annex document named “Toward NATO forces 2020” addressed the topic by introducing the concepts of *Smart defense* and *Connected Forces Initiative*. The aim of *Smart defense* is to revive the concept of achieving more efficiency in tough economic times and competing requirements through cooperation, rationalization and specialization. These concepts were all part of the PCC and are not new. The *Connected Forces Initiative* is an attempt to prioritize collective training and other measures in order to maintain the interoperability within the alliance. Both initiatives are in the realm of ideas and concepts, not of real and precise capability commitments.

In conclusion, there is no clear-cut answer to the first question on capability commitments. The aim of those commitments since the Washington Summit in 1999 is clear: to transform NATO into a more deployable, agile and flexible force. In other words, better expeditionary capabilities. However, most of the unclassified commitments are broad in nature and pertain to “themes” like enhanced mobility, sustainability and survivability. The PCC sets more precise areas of improvement like strategic lift and air-

ground surveillance, but the quantifiable commitments remain vague. The most precise commitments out of all the summits since 1999 are the LoA (two major and six smaller interventions) and the deployable force-ratio of ground forces set in the 2006 CPG. Therefore, when this study will compare the evolution of capabilities of the allied nations to the commitments made during the summits, it will focus on trends rather than precise and numbered goals.

The Outcomes

In this research, capabilities take the form of resources necessary for the conduct or the potential to conduct operations. The main resources that affect NATO's ability to conduct operations are human, equipment and financial in nature. This section will study the trends of the last decade regarding these critical resources in relation to the commitments made since 1999 at the Washington Summit.

First, NATO set an ambitious objective regarding human resources (soldiers) in the 2006 CPG: A minimum of 8 percent of troops undertaking or planned for sustained operations at any one time (this percentage is now 10 percent). The table below shows the evolution of NATO nation's percentage of troops deployed on UN, NATO or coalition operations.

Table 5. Percentage of Army/Marines enlisted troops deployed on UN, NATO or coalition operations in relation to national troop level of NATO countries.									
	2001			2007			2011		
	National Number Soldiers	Soldiers on ops	%	National Number Soldiers	Soldiers on ops	%	National Number Soldiers	Soldiers on ops	%
US	649,100	10,230	1.6	779,988	193,500	25	848,000	132,000	15.6
Canada	28,600	2,250	7.9	33,000	3,000	9.1	34,800	3,000	8.6
Rest of NATO	1,475,410	47,048	3.2	1,376,170	53,290	3.9	1,275,975	50,450	4

Source: Created by author with data extracted from: Col Christopher Langdon, ed., *The Military Balance* (London: The International Institute for Strategic Studies, 2001-02); James Hackett, ed., *The Military Balance* (London: The International Institute for Strategic Studies, 2008); James Hackett, ed., *The Military Balance* (London: The International Institute for Strategic Studies, 2012).

The percentage of US soldiers deployed on operations varied immensely from year to year because of the impact of the operations in Iraq and Afghanistan. Since the start of those operations in 2002, the ratio of US troops on operations have been well above the 10 percent mark. Combined with the fact that the US has always had more than 100,000 Army and Marines soldiers stationed abroad, the US easily fulfills its troop contributing commitment. Canada has deployed soldiers in a stable way throughout the last decade and is very close the 10 percent mark. However, with the early withdrawal of Afghanistan at the end of 2011, Canada's percentage actually sits at 3.2 percent. NATO remaining countries have also deployed their soldiers at a stable rate, but at a much lower ratio than the committed objectives. While some of the bigger European countries like France, Germany and Italy have deployed soldiers at a respectable average ratio of 6-7 percent, some of the countries with a large amount of soldiers, like Turkey (400,000) and Greece (90,000) have a deployment ratio of less than 1 percent.²¹ Furthermore, many smaller countries only contribute platoons and companies even though they have larger

organizations, perhaps because of sustainment issues or the perceived risk at home of deploying their scarce resources elsewhere.

Another human resource trend that is relevant to this research is the nominal level of troops trained and available for deployment. While the national regular force Army troop level increased in the US and Canada over the past decade, the amount of Army soldiers in the other NATO countries decreased by 25 percent since 2001 (see table 6). Since these countries have shown a stable deployment ratio between 3 and 4 percent in the last decade, this trend is particularly concerning because it implies that the number of deployed troops will also shrink if those countries continue on the same path.

Table 6. Evolution of nominal national number of soldiers of NATO countries				
	2001	2007	2011	Delta in percentage
US (Army + Marines)	649,100	780,000	848,000	30.5
Canada	28,600	33,000	34,800	21.6
European NATO (members in 2011)	1,705,460	1,415,170	1,275,975	(25.2)

Source: Created by author with data extracted from: Col Christopher Langdon, ed., *The Military Balance* (London: The International Institute for Strategic Studies, 2001-02); James Hackett, ed., *The Military Balance* (London: The International Institute for Strategic Studies, 2008); James Hackett, ed., *The Military Balance* (London: The International Institute for Strategic Studies, 2012).

The second capability trend discussed in this study, and perhaps the most important one, is the evolution in equipment procurement by NATO countries through the last decade. The acquisition of relevant material capabilities have been at the heart of NATO's transformation and count for the majority of commitments made in the

Summits. To show the trends in actual acquisitions in regards to these commitments, this study will concentrate on particular capabilities identified in the PCC (air-lift, Unmanned Aerial Vehicles (UAVs), air-to-air refueling, etc.) and as present requirements in Afghanistan (transport helicopters and patrol vehicles that provide blast protection against mine and IEDs). Table 7 shows the evolution in these capabilities between 2001 and 2011. An analysis of this evolution follows the table.

Table 7. Evolution of key capabilities in the last decade											
Capabi- lity	Sub- division	Equiva- lency	2001			2007			2011		
			US	CAN	EUR	US	CAN	EUR	US	CAN	EUR
Air-lift	Heavy	C-5/C-17	323	0	4	276	4	4	263	4	8
	Medium	C-130	526	32	286	514	24	342	345	37	321
Refueling	Air-to-air	KC-135	600	5	61	530	7	44	412	7	56
Transport helo	Heavy	CH-47	452	0	79	399	0	102	372	6	114
	Medium	UH-60	1,405	0	518	1,484	0	518	1,961	0	635
	Light	UH-1H	735	99	602	447	75	684	255	78	606
UAV	Strategic	Global hawk	1	0	0	11	0	0	24	0	0
	Operational	Predator	8	0	0	96	0	19	255	5	26
	Tactical	Shadow	7	0	30	414	24	297	278	10	301
IED prot	Medium patrol veh	MRAP	0	0	0	1,500	0	297	12,950	68	1,267

Source: Created by author with data extracted from: Col Christopher Langdon, ed., *The Military Balance* (London: The International Institute for Strategic Studies, 2001-02); James Hacket, ed., *The Military Balance* (London: The International Institute for Strategic Studies, 2008); James Hacket, ed., *The Military Balance* (London: The International Institute for Strategic Studies, 2012); The Military Periscope, <http://www.militaryperiscope.com.lumen.cgsccarl.com/users/index.shtml> (accessed 15 September 2012).

1. Air-lift: The allies have effectively closed the gap with the US regarding medium air-lift capability. However, this gap has remained abysmal in the heavy

capability (C-5 / C-17). It is even worse, when considering the amount of heavy air-lift capabilities to the amount of soldiers. The only actual heavy air-lift national assets in Europe are the eight C-17 in Britain. Europeans have been looking to procure such a capability with the Airbus A400M, an equivalent to the C-17. However, the program has suffered many setbacks and deliveries to European countries will realistically occur later in this decade.²² Seven European countries have ordered a total of 174 A400M, which will eventually significantly improve their capabilities.²³ As an interim measure since 2006, NATO is managing for collective use 3 newly acquired C-17 on behalf of 15 European countries.

2. Air -to-air refueling. Canada and the European countries have only maintained their capabilities. The only reason the gap with the US has shrunk is that the US has reduced its own inventory from 600 to 412. Nevertheless, the US still has more than seven times the amount that European countries possess. This capability gap remains important.

3. Transport helicopters. European countries have improved their capabilities by acquiring helicopters, but the US still has more than three times the amount of heavy and medium lift airframes. Furthermore, only a very limited proportion (6-7 percent) of European helicopters was actually available for operational usage in Afghanistan because of limited capabilities in desert and mountain terrain.²⁴ Canada has significantly improved their capabilities by acquiring six used CH-47 for operations in Afghanistan, and then a follow-on acquisition to be completed in 2013 of 15 new CH-47.

4. UAVs. European countries have made significant improvements in tactical UAV capabilities. However, there still remains an important capability gap in operational

and strategic UAVs. The strategic gap will lessen with the announced purchase of five Global Hawk UAVs by NATO as a collective acquisition. The operational capability is a significant shortfall, for Canada and for European countries. The Afghanistan Theater of operations proved that Predators and Reapers give important new capabilities to operational commanders in today's operational environment.

5. Improved patrol vehicles. The US has acquired an important number of Mine Resistant Ambush Protected (MRAPs) vehicles in the last decade, showing the importance of such a capability. They actually own more than ten times the amount of their allies. More European countries have started to acquire the capability. While in 2007, only Germany and Britain had such patrol vehicles, ten different countries now use them. The ratio of vehicles to troops shows however the need to continue the acquisition process.

Table 8. Amount of Army regular force soldiers per unit of capability by nations							
Capability		2007			2011		
		US	CAN	EUROPE	US	CAN	EUROPE
Air-lift – Heavy		1,882	8,250	353,793	2,439	8,700	159,486
Tpt Helo	Heavy	1,301	-	13,874	1,724	5,800	11,193
	Medium	350	440	2,732	327	-	2,009
UAV - Operational		5,411	-	74,483	2,516	6,960	49,076
Ptl veh – IED resistant		346	-	4,765	50	512	1,007

Source: Created by author with data extracted from: Col Christopher Langdon, ed., *The Military Balance* (London: The International Institute for Strategic Studies, 2001-02); James Hackett, ed., *The Military Balance* (London: The International Institute for Strategic Studies, 2008); James Hackett, ed., *The Military Balance* (London: The International Institute for Strategic Studies, 2012); The Military Periscope, <http://www.militaryperiscope.com.lumen.cgsccarl.com/users/index.shtml> (accessed 15 September 2012).

The third critical capability necessary for NATO to generate forces capable of conducting operations is financial. This segment will address the trends in overall nominal military budgets, but will also breakdown those budgets in allocation percentages in order to understand better how the money is spent. Chapter 2 underlined the extent of the differences in military expenditures from the US to Canada and Europe. The table and figure below depicts the last decade downward trends of European military expenditures in relation to the US in real terms and in per capita expenditures.

Table 9. NATO defense budgets in US\$m and percentage of total NATO expenditures						
	2001		2005		2010	
	BUDGET	PERCENT	BUDGET	PERCENT	BUDGET	PERCENT
US	305,421	66.8	505,796	69.6	692,780	72.9
CANADA	8,377	1.8	11,817	1.6	19,925	2.1
EUROPE	143,623	31.4	208,782	28.8	237,920	25

Source: Created by author with data extracted from James Hacket, ed., *The Military Balance* (London: The International Institute for Strategic Studies, 2012), 470.



Figure 8. Percentage by region of total NATO military expenditures

Source: Created by author with data extracted from James Hacket, ed., *The Military Balance* (London: The International Institute for Strategic Studies, 2012), 470.

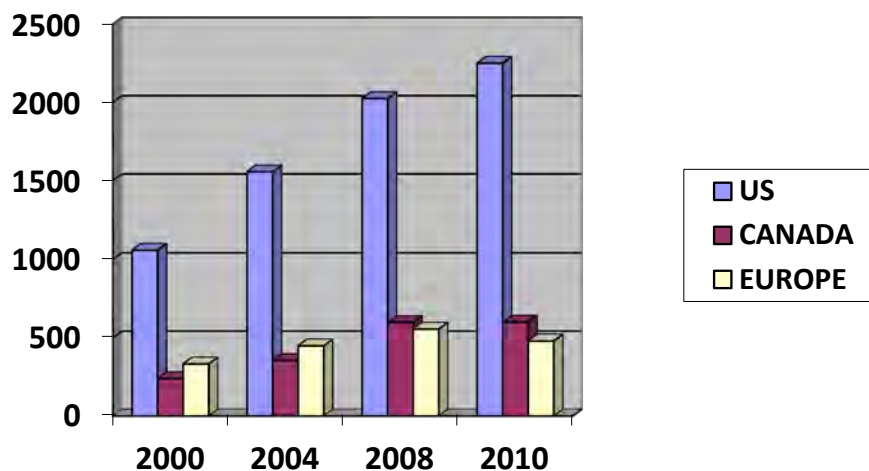


Figure 9. Per capita expenditures in US\$

Source: Created by author with data extracted from: Col Christopher Langdon, ed., *The Military Balance* (London: The International Institute for Strategic Studies, 2001-02); James Hacket, ed., *The Military Balance* (London: The International Institute for Strategic Studies, 2008); James Hacket, ed., *The Military Balance* (London: The International Institute for Strategic Studies, 2012).

There is no doubt that the gap is widening between the US and Europe in proportionate terms. While the percentage of the economy devoted to defense expenditures has increased in the US from 3.31 in 2001 to 4.77 percent in 2010, the European trend was the opposite: from just under the 2 percent in 2000, that percentage has fell to 1.58 percent in 2010.²⁵ But what is even more worrisome is that in the last few years, European defense expenditures have actually fallen in real terms. Between 2008 and 2010, total NATO Europe real defense spending fell by 5.4 percent.²⁶

The second part of the financial analysis examines the allocation of the national budgets in order to find trends and patterns. Figure 10 and 11 demonstrate that European countries allocate less on equipment expenditures (equipment acquisition and research and development) and more on personnel expenditures than the US. The European

average over the last 20 years for the allocation to personnel is in fact well above 50 percent of total budgets. In contrast, the US has allocated an average below 40 percent to personnel since 1990, with a sharp increase to 45 percent in 2009 and 2010. Allocating more to personnel necessarily means less financial resources for acquisitions. In fact, figure 10 shows that European countries have allocated an average of 15.35 percent to equipment expenditures over the last 20 years, while the US allocated an average of 25.18 percent. This difference in budget allocation is immense. Not only do European countries spend far less on defense, but they allocate almost half of what the US does for acquisition on every budget dollar in proportionate terms. The figures below show this disparity.

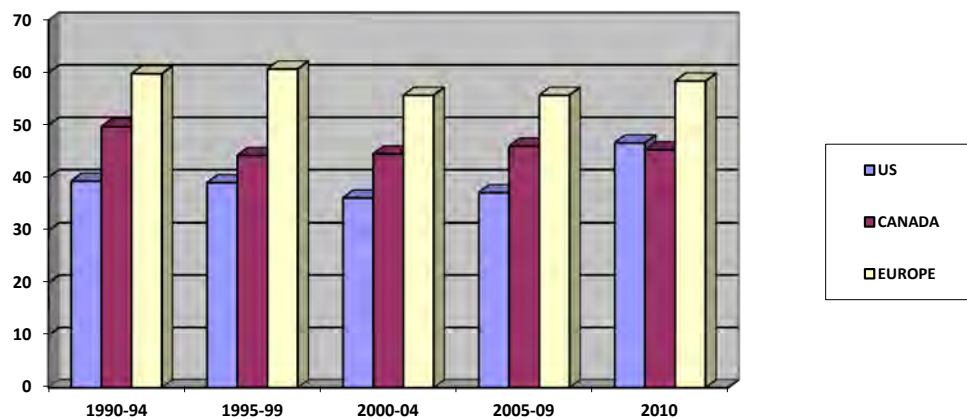


Figure 10. Percentage devoted to personnel expenditures

Source: Created by author with data extracted from North Atlantic Treaty Organization, “Financial and Economic Data Relating to NATO Defence,” 13 April 2012, http://nato.int/nato_static/assets/pdf/pdf_2012_04/20120413_PR_CP_2012_047_rev1.pdf (accessed 30 October 2012), 8.

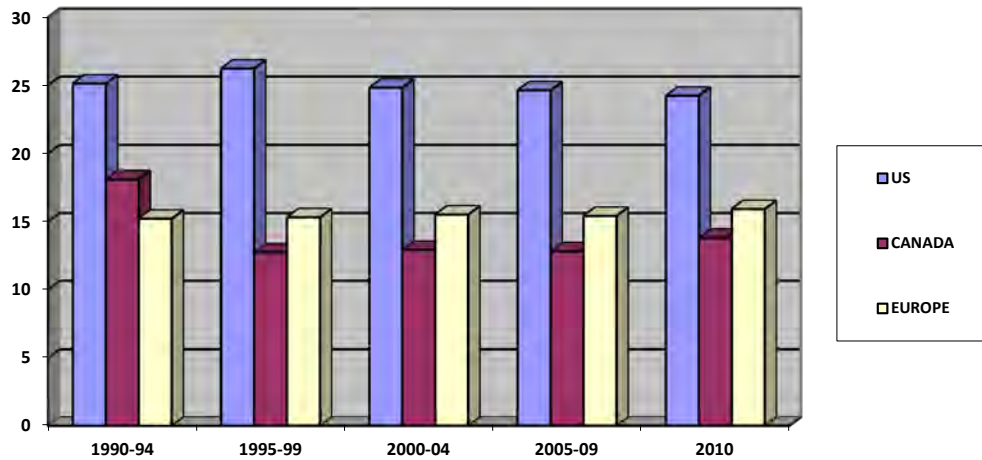


Figure 11. Percentage devoted to equipment expenditures

Source: Created by author with data extracted from North Atlantic Treaty Organization, “Financial and Economic Data Relating to NATO Defence,” 13 April 2012, http://nato.int/nato_static/assets/pdf/pdf_2012_04/20120413_PR_CP_2012_047_rev1.pdf (accessed 30 October 2012), 8.

The Operational Shortfalls

Since the end of the Cold War, NATO has conducted many operations. By their nature, duration, scale and required capabilities, the answer to question 2 above demonstrated that these operations can be divided into MJO and SJO. For the sake of this study since there is no NATO official definition of these categories, the author defines MJO as operations that require a large commitment of deployable and sustainable capabilities for more than a year. Since the 1990s, NATO conducted MJOs in Bosnia, Kosovo and Afghanistan. The SJOs are all other operations, including combat operations, which require fewer capabilities, either because of their duration or their nature. As an example, such operations could include indigenous training missions, fighting piracy on

the sea, humanitarian relief or a combat operation limited in time like in Libya in 2011.

Practically non-existent before the year 2000, SJOs have exploded in the last decade.

Table 10 recapitulates the different operations undertaken by NATO since the end of the Cold War:

Table 10. NATO operations since 1993					
COUNTRY	OPERATION	START	END	TYPE	LEAD COMPONENT
BOSNIA	DENY FLIGHT	APR 93	DEC 95	SJO	AIR
	SHARP GUARD	JUN 93	OCT 96	SJO	MARITIME
	DELIBERATE FORCE	JUL 95	AUG 95	SJO	AIR
	JOINT ENDEAVOR (IFOR)	DEC 95	DEC 96	MJO	LAND
	JOINT GUARD (SFOR)	DEC 96	JUN 98	MJO	LAND
	JOINT FORGE (SFOR II)	JUN 98	DEC 04	MJO	LAND
KOSOVO	ALLIED FORCE	MAY 99	JUN 99	SJO	AIR
	JOINT ENTREPRISE	JUN 99		MJO	LAND
ALBANIA	ESSENTIAL HARVEST	JUL 01	SEP 01	SJO	LAND
AFGHANISTAN	EAGLE ASSIST	OCT 01	MAY 02	SJO	AIR
	ACTIVE ENDEAVOR	OCT 01		SJO	MARITIME
	ISAF	AUG 03		MJO	LAND
	NATO TRAINING MISSION	NOV 09		SJO	LAND
IRAQ	NATO TRAINING MISSION	AUG 04	DEC 11	SJO	LAND
PAKISTAN	DISASTER RELIEF	OCT 05	FEB 06	SJO	LAND
SOMALIA	ALLIED PROVIDER	OCT 08	NOV 08	SJO	MARITIME
	ALLIED PROTECTOR	MAR 09	APR 09	SJO	MARITIME
	OCEAN SHIELD	AUG 09		SJO	MARITIME
LIBYA	UNIFIED PROTECTOR	MAR 11	OCT 11	SJO	AIR/MARITIME

Source: Major Alejandro Serrano Martínez, “NATO’s Level of Ambition in Light of the Current Strategic Context” (Monograph, School of Advanced Military Studies, 2012), 18.

At a certain point in 2011, when Operation Unified Protector was in affect between March and April 2011, NATO was conducting simultaneously two MJOs and five SJOs. From these observations, one can deduce that NATO is capable of fulfilling its LoA, expectations and commitments on the international stage. However, a closer look at

the most recent operations shows that NATO fulfilled its operational commitments with difficulty because of numerous shortfalls in specific capabilities.

NATO's biggest and most important operation of the last decade is certainly a case in point. ISAF has been plagued for the greater part of the long-term operation with insufficient troop contribution. From just under 20,000 total troops in 2003 and 2004, that number constantly grew over the years to be around 130,000 in 2012.²⁷ But the bulk of that growth came from one contributor, the United States, especially in the later years of the last decade. In the earlier stages of this operation, NATO allies contributed roughly half of the total ISAF troops. That proportion even grew to approximately two thirds in 2005 and 2006 as ISAF expended from the capital region to most regions of the country and total troop level hit 40,000.²⁸ However, even if the number of total troops continued to gradually grow, it became clear in 2007 and 2008 that it was still insufficient as ground commanders were constantly asking for more troops and equipment in the face of a renewed insurgent threat.²⁹

When comparing Afghanistan to the previous large scale NATO operation in Bosnia, it can be easily understood that ISAF required more troops to accomplish its security and nation-building mission. Afghanistan has more than 7.5 the amount of population in Bosnia and is 12.5 times larger in size. While there was a NATO soldier for every 80 Bosnians in 1996 at the start of the IFOR operation, there was only one NATO soldier for every 1000 Afghans in 2005. That number constantly decreased over the years, but still remains high in comparison with an average of a soldier for every 230 Afghans in 2012.³⁰

Helped by the upcoming drawdown in IRAQ, a new wave of important US troop contribution in 2008 significantly increased ISAF troop level. This US contribution level would continue to increase in 2009 under the newly elected President, Barack Obama, to reach its peak in 2010 and 2011. Figure 12 shows the growing disparity between US and NATO allies' contribution in time. As NATO allies augmented their contribution by 20 percent from 2006 to 2008 and by 50 percent from 2008 to 2010, the US increase was 115 and 140 percent respectively. After the 2010 peak, NATO allies contribution dropped by 18 percent between 2010 and 2012, while the US continued to increase by 15 percent. When considering that approximately half of the allies impose caveats on their troops (which limits their operational use), as seen in chapter 2, the disparity between the US and their NATO allies contribution is even steeper.

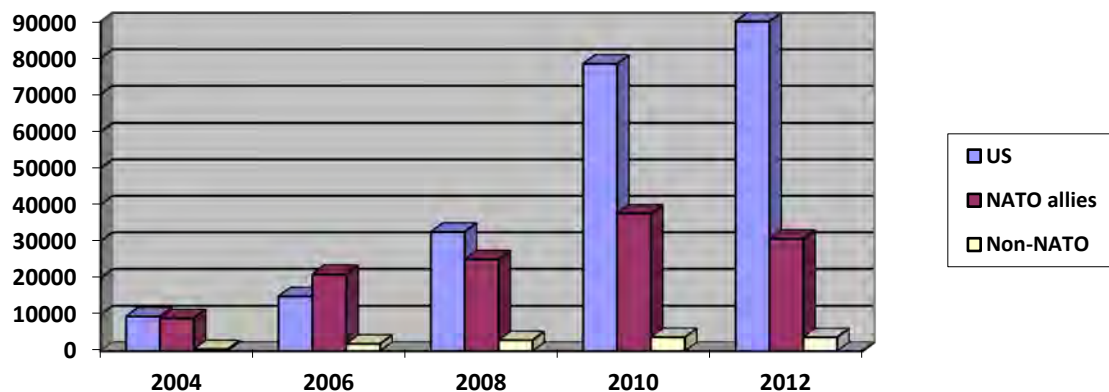


Figure 12. ISAF troop contribution level through time

Sources: Created by author with data extracted from Andrew R. Hoehn and Sarah Harting, "Risking NATO: Testing the Limits of the Alliance in Afghanistan" (Monograph, RAND Corporation, Santa Monica, CA, 2010); International Security Assistance Force (ISAF), "Key Facts and Figures," <http://www.nato.int/isaf/docu/epub/pdf/placemat.pdf> (accessed 19 September 2012).

In essence, when it was widely recognized that more troops were needed for success in Afghanistan in 2007-08, NATO allies' contribution increase never surpassed 37,500, which is very close to the number of troop contributions of all NATO allies to the IFOR operation in Bosnia in 1996. Is this number caused more by the limited expeditionary capability of NATO allies or by the limited political willingness to contribute troops? A case can be made for both arguments, but also for perception that this number is close to the maximum NATO allies' troop contribution capacity for long term out-of-area operations. This reality has to be considered for NATO's LoA and capability to deploy troops in the future.

The ISAF operation also showed the lack or shortages of important modern capabilities. NATO nations were clearly not ready to face the new threat posed by motivated and violent insurgents. Practically no nations had mine-resistant vehicles in their inventories and the usage of UAVs and transport helicopters was limited. The Allies had to react to the new situation and quickly purchase these important new capabilities. For instance, following a 2008 Independent Report on Canada's Future Role in Afghanistan highly recommending the purchase of transport helicopters and UAVs, Canada bought six used CH-47 Chinooks and rented three Heron UAVs from Israel in 2009.³¹ Canada also purchased mine-resistant vehicles from a South African company to protect better against IED blasts. From 2006 to 2009, the Canadian casualty toll had always been more than 30 a year. In 2010 and 2011, that number was cut in half.³² The important increase of US troops in Canada's area of operation in 2010 was a positive addition, but the good use of these new capabilities arguably saved lives and proved efficient.

It is always hard to predict what capabilities will be required in the future. Nevertheless, the renewed threats posed by terrorism and guerilla warfare were not something unpredictable. Insurgencies have occurred throughout history. But what the Afghanistan intervention shows us is that capability building often trails operational requests. Table 7 displayed how the US and their NATO allies acquired mine-resistant vehicles and UAVs over the past years. The increase of transport helicopters has not followed the same proportion, but NATO allies (less the US) augmented their medium-lift helicopters to a certain extent since 2001.

Lastly, despite its overall success, the recent Libya NATO intervention also showed deficiencies in specific capabilities that perhaps caused the operation to last longer than it should have had (the mission lasted seven months and had to be extended twice). First, NATO needed weeks, not days, to take control of the situation when the Allies decided to act in March 2011. USAFRICOM, the US operational HQ for the African region, took the early command and the US provided the bulk of capabilities at first. They were however looking to pass this lead to NATO allies as soon as possible and transit to a supporting role. NATO took that lead on 04 April as an air operations center was stood up in the Naples NATO operational HQ and the allies conducted the very large part of combat sorties. This HQ was designed to manage over 300 sorties a day, but could only run an average of 150, which is roughly a third of the sorties in the Kosovo 1999 air campaign.³³ It also had to be augmented by US targeting specialists, because it simply did not have that capability.³⁴

Second, NATO required many specialized airframes, mostly in a supporting role. The US provided 22 out of the 39 air-to-air refueling aircraft and 12 out of a total of 22

electronic warfare airframes used during the campaign.³⁵ Combat wise, they provided 100 percent of operational level combat-ISR UAVs.³⁶ Third, the US eventually had to provide its allies with PGMs as they ran-out during the mission.³⁷ The actual numbers of PGMs used is classified and therefore cannot be discussed in this research, the fact that NATO allies ran-out of PGMs for a relatively short air campaign is concerning.

But what is even more concerning is that NATO clearly could not have run this mission without the support of the US, even though Libya is at close proximity to European homeland and is a relatively weak country. NATO's limited strategic capabilities were not tested, yet many other shortfalls were displayed. What is also concerning for NATO is how most allies did not even participate in the operation. Besides the US, only 10 members actively participated and contributed to Operation Unified Protector. This reality sets a dangerous trend for NATO as an alliance capable of building consensus and concerted action.

In conclusion to this segment, although NATO declared in 2007 that 70 percent of the PCC commitments will be fulfilled by 2008 and the remainder will be in 2009,³⁸ the main NATO operations of the last decade show that it still lacks important capabilities beyond the US inventory. The Afghan theatre of operations displayed shortages of mine-resistant vehicles, transport helicopters and UAVs. Manpower-wise, it showed the requirement for the ground deployment and long-term sustainment of a very large amount of soldiers. In a security operation with nation-building goals, the ratio of population to soldier has to be strongly considered to analyze chances of success. Clearly, in comparison to historic cases, ISAF was under-resourced for an extended period of time. But when it was recognized that ISAF needed more troops, NATO allies had limited

room to maneuver in comparison with the US, even though they only had 4 percent of their total amount of soldiers deployed on operations. This limitation shows a lack of political willingness to contribute, but also shortages in the availability of troops for deployment and in strategic lift.

Operation Unified Protector in Libya displayed capability shortages in specialized support airframes (air-to-air refueling, electronic warfare and UAVs), PGM inventory, intelligence collection and the ability to efficiently command and control an air campaign.³⁹

But what is perhaps even more concerning, is that these two interventions showed an important shortage in overall preparedness. For both interventions, NATO did not seem to be able to react quickly. In Afghanistan, the US acted on its own in 2001 and 2002 before the ISAF mission was organized in 2003. It then took several years to muster the resources necessary to expand to the regions outside of the capital region and take positive control of the security situation. The lack of preparedness for the Afghanistan mission is understandable because of the distance, the novelty of the situation and the scope of the mission. It is not so understandable for the Libya intervention, which is at close distance from Mediterranean Europe. NATO needed the USAFRICACOM HQ to lead and organize the mission for the first few weeks, and when its air operations center was finally operational, it could only manage the third of the air-sorties it was designed for. Even though NATO was able to eventually take positive control of those two operations and achieve the desired effects, its inability to react quickly and efficiently is concerning and is to be added to the operational shortfalls.

The Trends

The most important trend that will influence NATO nations capabilities is the negative impact of the 2008 financial crisis that affected most Western nations. The aftermath period of this Europe-wide recession, characterized by negative to low economic growth and chronic budget deficits, has had a tremendous effect on NATO nation's capacity to generate funds for new capabilities. Between 2008 and 2010, European NATO nations gross government debt as a percentage of GDP rose by an average of 40 percent, resulting in a 5.4 percent drop in total real defense spending, which is equivalent to approximately US\$45bn.⁴⁰

France has avoided procurement cancellations by delaying modernization programs, but cuts seem inevitable. Real defense expenditures have been reduced by 14.5 percent from 2008 to 2010, and further cuts are to be envisioned with the newly elected socialist party.⁴¹ In Germany, important cuts in defense expenditures are planned until 2014 (total of \$8.3bn euros), which was arguably one of the reasons behind parting ways with conscription in 2011.⁴² They also reduced their level of ambition regarding the number of troops on sustained deployments from 14,000 to 10,000.⁴³

In the United Kingdom, having to cope with an 8 percent budget reduction, the Ministry of Defense's latest strategic review resulted in a 20-30 percent reduction in the operational level of ambition and deployable capabilities.⁴⁴ As such, they have announced that the number of soldiers will be reduced from 102,000 to 90,000 in 2015 and 82,000 by 2020.⁴⁵ They also have retired or are planning to cut many important capabilities, like the aircraft carriers, the *Harrier* aircraft and the *Nimrod* surveillance system.⁴⁶ They are even planning to cancel the *Sentinel* UAV program in 2015 after the

closure of the Afghan mission, even though the Prime Minister declared to a House of Commons Committee that “if there was one lesson (from Afghanistan), it is that the extra emphasis we put on ISTAR and drones will be even more necessary in the future.”⁴⁷ The proportion of government spending allocated to defense will gradually decrease to fall under the 2 percent mark by 2015.⁴⁸

In the US, budget cuts haven’t been felt yet by the Department of Defense (DoD), but one thing is for sure: they are coming and they will be important. Like many European countries, the US economy has been hit hard by the 2008 economic crisis and public finances are in a bad posture. The magnitude of the US deficit resulted in a historic downgrade of the US debt by the ratings agency Standard & Poor’s in July 2011 and a last minute debt-ceiling deal in the following month, which resulted in major defense cuts (approximately US\$450bn dollars over the next 10 years).⁴⁹ Furthermore, as part of the last minute debt-ceiling deal, a forced “sequestration” of an extra US\$1.2tr over 10 years will come into play if US Congress cannot agree to another spending cut plan before January 2013 (defense would bear approximately half of this additional cut).⁵⁰ These cuts seem gigantic by the sheer numbers, but in perspective they would bring back US defense spending to the average of the Cold War period.⁵¹ But they will have a major impact on US future capabilities and a significant strategic influence on US and NATO’s future.

Capability-wise, the US Army plans to downsize its active component from the peak of 570,000 in 2010 to 490,000 soldiers in 2017, inactivate at least eight Brigade Combat Teams (BCTs) and conduct a full organizational and posture review.⁵² Out of these eight BCTs, two Armored BCTs (ABCTs) presently stationed in Germany have been identified, leaving in Europe a significantly reduced US presence. The only

remaining European-based US force projection forces will be a Stryker Cavalry Regiment in Germany and an airborne BCT in Italy.⁵³

The strategic implication of this drawdown in Europe is concerning for NATO. The US has pledged their continuous support to their commitments to the alliance and announced they will allocate a US-based ABCT to the NRF and participate more actively in NATO exercises.⁵⁴ But the armored capability, and the ability to project military power on short notice, will be greatly reduced in Europe. Furthermore, President Barack Obama unveiled the newest US strategic concept last January in a document entitled “Sustaining US Global Leadership: Priorities for the 21st Century Defense.” In accordance with the expected more limited financial means, the strategy envisions:⁵⁵

1. A smaller, leaner military that is agile, flexible and rapidly deployable;
2. Rebalancing global posture and focus to the Asia-Pacific region and the Middle East;
3. Maintaining presence elsewhere using “Small Footprint Operations” (economy of effort);
4. Releasing DoD of the responsibility to conduct two simultaneous major wars to one major war and the capacity to deter another aggressor at the same time;
5. Protect technological edge with key capabilities and the capacity to mobilize and grow when needed.

The strategic impacts are immense on the US force structure. First, they announce US intentions to stay away from protracted conflicts that require a large amount of deployed soldiers. In the future, they will prefer the use of “non-military means and military-to-military cooperation to address instability and reduce the demand for

significant US force commitments to stability operations.”⁵⁶ Second, it releases DoD from a major constraint (conduct two major wars at the same time) that influenced the size and structure of the Army since 1993 and requires the Army to be more responsive (deployable) and flexible.⁵⁷ In that sense, the BCTs to be eventually inactivated will have a greater chance to be the more costly and less deployable ABCTs. Third, it entails a necessary posture change and focus to Asia that will negatively impact US capacity to act in Europe. The importance of the Middle-East region ensures that Europe will remain important geographically to the US, but to a much lesser extent than what Europeans were accustomed to in the last 50 years. Europeans could understandably ask themselves if the inactivation of the two ABCTs are merely a first step to further withdrawal from Europe in the next decade. There is no way around it: Europe will need to carry a heavier burden if it wants the same level of security that it has been accustomed to. It is a simple mathematical equation.

Canada is facing a somewhat different situation. Out of most NATO nations, it has suffered considerably less from the 2008 economic crisis. Nevertheless, Canada is still working its way out of a deficit by cutting expenses and all governmental ministries have been asked to contribute. The Ministry of Defense announced in April 2012 a US\$2bn yearly cost-saving plan in order to protect actual and future operational capabilities. These measures include re-organization of strategic and operational headquarters, cutting civilian personnel and full-time reservist in administrative positions by half, reducing contracts allocated to consultants and disinvesting in low-priority activities and equipment.⁵⁸ This plan is intended to protect the actual level of personnel, training requirements and key equipment procurement announced in the 2008 strategic

plan in the context of fiscal austerity.⁵⁹ It aims to protect the replacement by 2020 of important capabilities, like Canada's next generation of fighter aircrafts and combat ships. It also aims to protect the operational force level of the Army, which is relatively low at only three combat brigades, and their normal training requirements.

The overall financial situation of NATO nations will certainly have short and medium term negative impact on their capacity to generate forces and capabilities, and possibly even on the very long term. NATO will have to consider this state of affairs if it wants to be realistic in its future ambitions. It simply will not have the relative strength and potential it once had to act on the world stage.

Important trends can also be observed from recent operations. Operation Unified Protected, the NATO-led Libya intervention, is a case in point in two aspects. First, it set an important precedence with its "coalition of the willing" structure. As per agreement, NATO needs total consensus from its members to conduct an operation. One veto from one member can potentially block an entire operation. In the case of Libya, where the strategic impacts are limited and do not pose a direct security threat to the members, many NATO nations did not see the necessity to intervene, especially in the financial context. They agreed, however, not to block the mission but to simply not participate as a contributing country.⁶⁰ This level of neutrality, while the alliance is conducting an important mission at the door steps of Europe, was a first. And perhaps will not be the last. NATO has to consider this recent trend, especially in relation to the "Smart Defense" capability pooling and sharing initiatives. If only a few members participate in an operation, what will happen to the capabilities that are shared by participating and non-

participating countries? Will the non-participating countries agree and what will be the parameters?

Secondly, the Libya intervention broke the long-lasting assumption that the US will lead any important NATO operation. The US took charge in the preparation and initial stages of the operation, but quickly took a back seat essentially for political reasons. France and the United Kingdom took the relay, but with limited success as seen earlier in chapter 2. They were simply not prepared to take-on that leading role, and the rest of the allies were not postured for an increased contribution in the absence of the US. For the reasons mentioned above in this segment, the capacity and willingness of the US to lead, or even participate, in a similar operation in the vicinity of Europe will be a lot lower than it was for the first 60 years of the Alliance. The allies should take note of that reality before it hits them again.

In conclusion to this segment, NATO will have to take into account actual trends that will impact its near and medium-term future. The economic situation of most NATO nations will significantly impact their capacity to generate and even maintain capabilities in the foreseeable future. Reduced budgets mean spending less on personnel and on equipment procurement. Ultimately, it also translates into a smaller capacity to conduct operations, or at least large-scale operations. Finding ways to do more with less will therefore be of utmost importance for the Alliance, especially in the context where the US will have more limited means and a smaller appetite for leading any NATO operations.

The Initiatives

The description of NATO's evolution since the end of the Cold War in chapter 2 identified recent initiatives to improve its members' capabilities. These initiatives are definitely a step in the right direction in the sense that their aim is to enable NATO to do more with less. In other words, they intend on improving NATO's efficiency. The most publicized initiative has certainly been the concept of *Smart Defense*, which entails improved efficiency through capability pooling, sharing and even specializing. The idea of gaining efficiency through pooling resources is certainly a promising way to improve capabilities without injecting more funds. It could lead to economies of scale that can lower acquisition costs and even render possible the procurement of expensive capabilities that otherwise would be too costly. The 2008 Strategic Airlift Capability agreement, where 15 countries pooled financial resources to acquire three C-17 *Galaxy* flown and maintained by international crews, is certainly a case in point. Furthermore, the French and the British have recently signed a Defense and Security Co-operation Treaty in order to create economies through greater coordination.⁶¹

However promising, the problem associated with pooling assets in the present political context is that it is very limited in practical use. The actual political and legal framework of NATO nations to use capabilities on external deployments is different from nation to nation and is entirely based on national sets of rules. For NATO's operations, they are entirely free to contribute capabilities or not depending on their own political decisions. This reality implies that pooling resources can only have real long-term operational benefits at the expense of national autonomy over the control of the pooled capabilities. It also implies a high level of political consensus on the deployment of those

capabilities and strategic vision. The interventions of the last decade, particularly the one in Libya, shows that the allies are far from such a consensus when it comes to deploying troops and capabilities on operations.

Specialization, or niche capabilities for particular nations, requires an even greater degree of consensus and collaboration. It requires nothing less than full political integration. To demonstrate this point, imagine an important capability that is only owned or used by one or few nations. What will happen if that nation decides to not participate in an operation where this specific capability is required? As long as NATO cannot enforce the deployment of a particular capability, specialization will not be a viable solution.

If capability pooling efforts continue in the present trajectory, it will be interesting to follow the eventual consequences in case of disagreement over their usage and deployment. In the present structure, these disagreements are bound to happen. On the long term, NATO will have to adapt its structures if it wants to further its pooling and specialization efforts. But in the actual context, it is not for tomorrow. Until then, NATO will need to focus on more realistic goals, like improving procurement cooperation for instance. Research and development would perhaps also be an area where possible efficiency improvement may be gained. Even today, notwithstanding the strong economic ties of the European Union, European NATO countries have a fragmented industry. They procure 73 percent of their defense equipment and spend 87 percent of their research efforts within their boundaries.⁶² There are certainly potential efficiency and cost saving gains to be made by fused European defense market. Otherwise, on the present course, European countries will have to resort to cuts in either personnel or equipment programs.

The new NDPP, in the present political conditions, may have more direct positive impact on the Alliance efficiency. As described in chapter 2, it aims to link capabilities to strategic and operational requirements in a five step approach. The concept to link capabilities to requirements established from the strategic vision is in essence commendable and necessary. The new Strategic Concept and follow-on Political Guidance provide this first step (strategic vision). The second step of this process entails identifying specific requirements to enable the accomplishment of the strategic vision. This step is crucial because it is meant to match what needs to be accomplished with specific capabilities.

The author of this thesis argues that in the present conditions, NATO cannot conduct a proper and detailed analysis of the required capabilities. As mentioned earlier in this chapter, the actual operational requirement, at least in the unclassified realm, is to be able to conduct two MJOs and six SJOs. It does not provide more precise information on what type, nature and scope of these operations. In these circumstances, how can anyone plan with precision what capabilities are required? Are the MJOs large-scale counter-insurgencies operations like Afghanistan or quick high-intensity conflicts like the Gulf War? Are they a combination of both types of conflicts? Is one of the possible SJO an air campaign in support of local militias to dislodge a dictator or a maritime embargo on an unwanted regime? These types of operations require a very different set of capabilities. This implies that the political guidance on the potential operations to be undertaken has to be very specific on their nature and scope, which is not the case actually.

The Findings

The aim of this chapter was to answer the six secondary questions from chapter 1 and 3 in order to enable key deductions that will answer the primary question. Here is a summary of the findings that can be made from the analysis above.

What capability requirements NATO military interventions have shown in the 1990s?

The most important new requirement that the major operations of the 1990s demonstrated is the necessity to deploy troops and equipment, often on short notice, on out-of-area operations and the ability to sustain them for extended periods of time. In other words, it is the requirement for expeditionary capable military forces that are able to project their capabilities. This requirement entails specific moving capabilities like strategic and tactical air-lift, but also national forces organized and prepared for long-term operations at a distance from their home stations. The second most important new requirements brought forward by the 1990s was the increased importance of technological superiority, even during peace-keeping operations. This includes specific combat capabilities like stealth combat aircraft, PGMs and surveillance airframes, but also the technologies that ensure information superiority and the ability to process that information.

These new requirements had an undeniable impact on NATO's attempt to transform into a more relevant military alliance in the following decade.

What commitments resulted from NATO summits and Strategic guidance since the Washington Summit in 1999?

The new Strategic Concept unveiled at the 1999 Washington summit, as well as the summit declaration, are at the origin of NATO transformation in the sense that they formally established a requirement for flexible and adaptable military forces disposed to conduct “out-of-area” operations. The following initiatives, like the DCI and PCC, were meant to transform NATO nations into such dispositions. More precise and adapted to situation, the PCC was the main agreement on capability development commitment that influenced the next decade. It provided specific goals in eight areas of improvement and clear goals the allies could use to guide their own transformation at the national stage. Other commitments on force structure and NATO’s LoA were to be added later, but the PCC was the key agreement.

How did NATO nation’s military capability building evolve in the past decade to adapt to commitments and previous shortfalls?

The analysis of data on the evolution of NATO nations capabilities demonstrate that they have made progress in some areas, but there remains important work to be done. Equipment-wise, there has not been much progress in strategic air-lift, air-to-air refueling, heavy transport helicopters and operational-level UAVs.

Personnel-wise, European nations haven’t augmented substantively the percentage of deployed troops to operations, which remains far below the agreed percentage (actually 10 percent). Is it entirely because of political reasons or also feasibility reasons? Have European nations maximized the amount of soldiers deployed? These questions go beyond the scope of this research, but should be studied by NATO because they could put light to a more realistic potential number of NATO soldiers that could be deployed on operations.

Financially, there hasn't been much difference in the last decade on the proportion of allocated percentage to personnel and equipment. The US allocates a far bigger proportion to material acquisition than the rest of the allies, who still spend a bigger percentage on personnel.

What capability challenges still remain today?

NATO's operations of the last decade show that it still lacks important capabilities beyond the US inventory. First, the Afghan theatre of operations displayed shortages of mine-resistant vehicles, transport helicopters and UAVs. Manpower-wise, ISAF was under-resourced for an extended period of time. When it was recognized that ISAF needed more troops, NATO European nations had limited room to maneuver in comparison with the US, even though they only had 4 percent of their total amount of soldiers deployed on operations. This limitation shows a lack of political willingness to contribute, but also shortages in the availability of troops for deployment and in strategic lift.

Second, Operation Unified Protector in Libya displayed similar capability shortages as the Kosovo air-campaign of 1999: shortages in specialized support airframes (air-to-air refueling, electronic warfare and UAV airframes), PGM inventory, intelligence collection and the ability to efficiently command and control an air campaign.

Lastly, these two interventions showed an important lack of overall preparedness. For both operations, NATO did not seem to be ready to conduct the operations it was undertaking. It took a very long time in Afghanistan to build-up the resources that the scope of the mission required for success. In Libya, while a quick reaction and decisive action was crucial, it took some time for NATO to set-up its command and control

structure and what could have been a very short operation took more than six months. In other words, NATO did not look efficient and clearly displayed operational shortfalls.

What are the trends that will affect NATO's capability building in the future?

NATO will continue to be greatly affected by the recent economic crisis for the foreseeable future. Most of the allies' military budgets have been reduced in real terms and are planning to downsize their force structures. The US and the UK, two of the most expeditionary focused and structured force in NATO, are good examples of this reality. The amount of forces available for operations will decrease, as well as the financial ability to pay for such deployments.

NATO will also inevitably have to face the impacts of the US shift of strategic priorities to the Asia-Pacific and Middle-East regions. The US will have less resource to allocate to the European region and will have less political appetite for deployments in that region. Europeans will have to shoulder a greater share of the burden for their own security in the long-term.

Another important trend to consider is the "coalition-of-the-willing" approach to conducting operations. While this concept gives more flexibility for NATO as a whole in permitting the conduct of operations even though not all of the allies positively contribute and wish to adopt a neutral tone, it raises the question of fair burden-sharing once again. It also raises questions on the feasibility of capability specialization: what will happen if a particular capability is the responsibility of a specific nation that does not want to participate in an operation?

How NATO intends to address its capability challenges?

In this age of financial austerity, NATO is actively promoting the concept of Smart Defense to do “more with less” and uses a new planning process to align capabilities to requirements. Both initiatives are promising and could amount to important efficiency gains. However, the author of this thesis argues that they presently lack key elements to truly have long-term beneficial effects. The former requires a much more integrated political structure to have true efficiency gains from pooling, sharing and specializing capabilities. The present structure will inevitably pose problems when it will be time to decide on the usage of the shared capabilities. The latter requires more precision on NATO’s LoA. A clear understanding of the precise delimitation of possible types of operations to be conducted is required to plan for the right requirements and capabilities. Presently, the delimitation is rather vague.

¹Terry Terriff, Frans Osinga, and Theo Farrell, eds., *A Transformational Gap?: American Innovations and European Military change* (Stanford, CA: Stanford University Press, 2010), 66.

²*Ibid.*, 22.

³*Ibid.*, 18.

⁴Carl Ek, *NATO’s Prague Capabilities Commitment* (Washington, DC: The Library of Congress, 2007), 1.

⁵Ivo H. Daalder and Micheal E. O’Hanlan, “The United States in the Balkans: There to Stay,” *The Washington Quarterly* 23, no. 4 (Autumn 2000): 166-167.

⁶North Atlantic Treaty Organization, “Op Allied Force,” <http://www.defense.gov/specials/kosovo/> (accessed 19 September 2012).

⁷Les premiers enseignements de l’operation «force alliee» en Yougoslavie: quels enjeux diplomatiques et militaires? [The first lessons of operation “Allied Force” in Yugoslavia: what are the diplomatic and military stakes], <http://www.senat.fr/rap/r98-464/r98-464.html> (accessed 18 August 2012).

⁸North Atlantic Treaty Organization, “The Washington Summit Declaration,” <http://www.nato.int/docu/pr/1999/p99-068e.htm> (accessed 19 September 2012), paragraph 1.

⁹North Atlantic Treaty Organization, “The Alliance’s Strategic Concept,” 24 April 1999, http://www.nato.int/cps/en/natolive/official_texts_27433.htm (accessed 14 September 2012), paragraph 52.

¹⁰North Atlantic Treaty Organization, “Defence Capabilities Initiative,” 25 April 1999, <http://www.nato.int/docu/pr/1999/p99s069e.htm> (accessed 19 September 2012), paragraph 1.

¹¹*Ibid.*, paragraph 4.

¹²North Atlantic Treaty Organization, “Prague Summit Declaration,” 21 November 2002, <http://www.nato.int/docu/pr/2002/p02-127e.htm> (accessed 19 September 2012), paragraph 1.

¹³Carl Ek, “NATO’s Prague Capabilities Commitment,” 3.

¹⁴*Ibid*

¹⁵Julianne Smith et al., “Transforming NATO (...again): A Primer for the NATO Summit in Riga 2006,” Center for Strategic and International Studies (CSIS), November 2006, http://csis.org/files/media/csis/pubs/061114_nato_primer.pdf (accessed 19 September 2012), 16.

¹⁶North Atlantic Treaty Organization, “Comprehensive Political Guidance,” 29 November 2006, http://www.nato.int/cps/en/natolive/official_texts_56425.htm (accessed 19 September 2012), paragraph 18.

¹⁷*Ibid.*, paragraph 11.

¹⁸Julianne Smith et al., “Transforming NATO.”

¹⁹North Atlantic Treaty Organization, “Comprehensive Political Guidance,” 29 November 2006, paragraph 13. The new ratios are now 10-50 percent.

²⁰North Atlantic Treaty Organization, “Lisbon Summit Declaration,” 20 November 2010, http://www.nato.int/cps/en/natolive/official_texts_68828.htm (accessed 19 September 2012), paragraph 45.

²¹James Hacket, ed., *The Military Balance* (London: The International Institute for Strategic Studies, 2012).

²²Airbus official internet site, <http://www.a400m.com/LatestNews/tabid/176/ArticleID/217/ArtMID/681/Airbus-Military-reconfirms-A400M-production-output-for-2013-.aspx> (accessed 22 October 2012).

²³Airbus official internet site, <http://www.a400m.com/Aircraft/A400MAbout.aspx> (accessed 22 October 2012).

²⁴James Hacket, ed., *The Military Balance* (London: The International Institute for Strategic Studies, 2010), 108.

²⁵James Hacket, ed., *The Military Balance* (London: The International Institute for Strategic Studies, 2012), 48 and 75.

²⁶*Ibid.*, 74.

²⁷International Security Assistance Force (ISAF): Key Facts and Figures, <http://www.nato.int/isaf/docu/epub/pdf/placemat.pdf> (accessed 19 September 2012).

²⁸Ivan Dinev Ivanov, "Continuity and Change of Alliance Transformation: The Case of NATO's Involvement in Afghanistan" (Paper presented at the International Studies Association 2009 Annual Convention, 15-18 February 2009, New York City, NY), 12.

²⁹Andrew R. Hoehn and Sarah Harting, "Risking NATO: Testing the limits of the Alliance in Afghanistan" (Monograph, RAND Corporation, Santa Monica, CA: 2010), 43.

³⁰International Security Assistance Force (ISAF), Key Facts and Figures.

³¹John Manley et al., "Independent Panel on Canada's Future Role in Afghanistan" (Research, Minister of Public Works and Government Services, Ottawa, Ontario, 2008), 37.

³²CBS News, "In the line of duty: Canada's casualties," 31 October 2011, <http://www.cbc.ca/news/background/afghanistan/casualties/list.html> (accessed 8 September 2012).

³³James Hacket, ed., *The Military Balance* (London: The International Institute for Strategic Studies, 2012), 16.

³⁴*Ibid.*

³⁵*Ibid.*, 14.

³⁶*Ibid.*

³⁷Eric Schmitt, “NATO sees flaws in air campaign against Qaddafi,” *New York Times*, 14 April 2012, <http://www.nytimes.com/2012/04/15/world/africa/nato-sees-flaws-in-air-campaign-against-qaddafi.html> (accessed 19 September 2012).

³⁸Carl Ek, “NATO’s Prague Capabilities Commitment,” 5.

³⁹Eric Schmitt, “NATO sees flaws in air campaign against Qaddafi.”

⁴⁰Hackett, *The Military Balance* (2012), 74.

⁴¹*Ibid.*

⁴²*Ibid.*, 79.

⁴³*Ibid.*

⁴⁴*Ibid.*, 81.

⁴⁵*Ibid.*, 83.

⁴⁶*Ibid.*, 81.

⁴⁷*Ibid.*, 83.

⁴⁸*Ibid.*, 85.

⁴⁹*Ibid.*, 43-44.

⁵⁰*Ibid.*

⁵¹*Ibid.*, 44. US defense spending increased by 90 percent since 1998.

⁵²Andrew Feickert and Charles A Henning, *Army Drawdown and Restructuring: Background and Issues for Congress* (Washington, DC: Congressional Research Service, 20 April 2012), 8-9.

⁵³*Ibid.*, 21.

⁵⁴*Ibid.*, 9.

⁵⁵*Ibid.*, 2-3.

⁵⁶US Department of Defense, *Sustaining US Global Leadership: Priorities for the 21st Century Defense* (Washington, DC: Government Printing Office, January 2012), 6.

⁵⁷Feickert and Henning, 19.

⁵⁸Chief of Defense Staff (CDS), General Directive, CANFORGEN 068/12 CDS 010/12 041632Z APR 12: Economic Action Plan 2012.

⁵⁹Canada First Defense Strategy, <http://www.forces.gc.ca/site/pri/firts-premier/index-eng.asp?WT.svl=CFDLEFT> (accessed 8 October 2012).

⁶⁰Only 8 out of the 28 members nations participated to the strike operations.

⁶¹James Hacket, ed., *The Military Balance* (London: The International Institute for Strategic Studies, 2011), 78-79. The two nations are to develop a Combined Joint Expeditionary Force and a UK-French integrated carrier strike group by 2020.

⁶²James Hacket, ed., *The Military Balance* (London: The International Institute for Strategic Studies, 2012), 76.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study is to determine how NATO can best address its capability challenges going forward. Through a thorough review of the last 20 years, the analysis conducted in the previous chapter demonstrates that although NATO embarked on the path of modernization at the turn of the century, its operational efficiency still suffers from important capability shortages and challenges. Indeed, key findings from the analysis identified shortfalls in specific equipment, but also important disparities in deployment personnel levels and budget allocation. Furthermore, the unfavorable economic context and the US strategic shift toward the Asia-Pacific region will accentuate these challenges for the foreseeable future. NATO's answer to this problem, Smart Defense, is promising. However, in the present NATO political framework, it can only go so far and will not be the answer in itself. In an effort to formulate realistic and concrete steps to improve NATO's capability challenges, this final chapter will make recommendations based on the fundamental interpretation that there is no silver bullet answer.

In order to address its capability challenges, NATO will need to take a comprehensive approach that will enable efficiency gains on multiple fronts. The nature of the problem is too broad to be addressed by the simple acquisition of specific material capabilities that are presently lacking. Moreover, the financial context will hamper NATO nations' procurement potential. NATO will therefore need to consider other avenues of approach that will enable it to do more with less.

This thesis argues that although taking concrete steps to acquire particular capabilities remains a priority, NATO should also explore in parallel measures to improve its political guidance and its operational readiness.

Recommendations

Using a comprehensive operational approach, these measures will be divided along three “lines of effort” that contains various objectives related to a desired end-state (see appendix B for a one-page figure). These objectives are not decision points in the sense that they could occur simultaneously or in different chronological order. The 2020 horizon was chosen as it represents the next important strategic milestone. NATO conducts a strategic review every decade and the next one is due in 2020. The proposed measures are meant to favorably position NATO for the next strategic review.

Line of Effort 1: Improve Political Guidance

Objective 1A: Adjust the LoA

First, the present LoA (2 MJOs and 6 SJOs) is unrealistic considering the financial context and the general combat fatigue from the last decade of deployments. The US recently recognized their inability to conduct two large-scale joint operations at the same time and lowered their own LoA to one large-scale operation with the ability to conduct simultaneous shaping operations in other theaters of operation. NATO should mirror this downsize. Second, the LOA is too broad for proper planning of requirements since it does not specify what an MJO or SJO entails. Should NATO conduct two ISAF-scale operations concurrently? It is unfeasible, even if the present LoA suggests it could. An adjusted LoA should also specify what kind of operations NATO should be ready to

conduct, or at least give some better guidelines because different kinds of operations need different kinds of capabilities. In order to plan for the long term and prioritize certain capabilities versus others, NATO needs to agree more precisely on what it can and wants to do. The recent operational history presented in chapter 2 and 4 demonstrated that NATO conducted at least one corps size land-centric joint operation at any time during the past 20 years. It also demonstrated that NATO should, concurrently, be ready to conduct smaller size joint operations that are land, sea and air-centric. That is an important precision that is lacking in the present LoA. Giving more precision on the nature and the size of the force package will enable better planning conditions to generate the right capabilities for the right tasks and missions. Table 11 is a recommendation for a downsized and more precise LoA.

Table 11. Adjusted LoA					
Specification	Org size	Type	Equivalent	Provide ¹	
				US	Europe
MJO: Land-centric	Corps or higher	Collective defense, Offensive + stab ops / COIN / peace enforcing	Bosnia/ Afg/Iraq	Corps	Corps
SJO: Air-centric	Wing	Off ops in sup of local org	Kosovo/ Libya	Wing	Wing
SJO: Land-centric	Brigade – Division	Collective defense, Offensive + stab ops / COIN / peace enforcing	Kosovo	Bde	Bde
SJO: Sea-centric	Carrier Strike Group (CSG) or lower	Fight piracy	Somalia	CSG	Surface Action Group
SJO: 2 x trg ops	Battalion or Brigade	Trg local sec forces	Afg / Iraq	Batt	Batt
Other: Partnerships	Battalion or Brigade	Engagements + trg		Batt - Bde	Batt – Bde
Other: NRF	Brigade+	Rapid Reaction Force	Humanita- rian aid (Pakistan)	Bde	Bde

Source: Created by author.

Objective 1B: Adjust Defense Expenditure Goals to Maximize Capability Building

The first step of this objective would be to set a more realistic percentage goal of defense expenditures to GDP. The present 2 percent ratio has never been reached by the majority of the allies and never will be for political reasons. A ratio slightly above the average of the past few years would have more positive effects on the contributing nations to reach that goal. For instance, since the average ratio of the allies without the US was between 1.6 and 1.7 percent from 2008 to 2010,² a ratio of 1.75 percent would be more appropriate. Moreover, this ratio could be reviewed and move up or down, depending on variables like the forecasts in annual economic growth or decline.

Secondly, balancing the allocation of budgets between personnel, equipment, infrastructure and training is crucial for operational efficiency. Spending too much on personnel expenditures may prevent equipment modernization efforts, while not enough may translate into insufficient manpower. Figure 10 and 11 showed important disparities in the allies' allocation of budgets. The European nations spend far more on personnel (on average close to 60 percent of their budgets) and the US on material procurement (more than 10 percentage point difference). NATO should conduct a study to analyze the ratios that maximize efficiency and demonstrate the benefits for the allies to agree on new expenditure goals.

Object 1C: Promote Compliance in Expenditure Goals

The lack of a coercive power to enforce policies may be the most important weakness of the alliance. The 2 percent ratio of military expenditures to GDP is a good example of this situation. The majority of the members are not respecting the political

guidance as there are no real incentives to do so. While the alliance gives the security benefits from collective defense, the real costs provided by the allies are mostly based on voluntary contributions from its members. Nations act rationally, like tax-payers do within a state, and they will tend to “free-ride” in the absence of positive or negative incentives. The analogy is that the alliance provides the collective service (security) a government normally does for citizens of a state. But unlike the relationship between states and citizens, NATO does not have the power to compel its members to contribute. It only provides guidelines. Contributions are totally voluntary, besides minor annual payments for functional purposes (table 1). Understanding that there are no repercussions and that his own personal contribution would not make the difference, would a citizen willingly provide his fair share? It is reasonable to say that a certain portion would, but perhaps most would not.

This lack of coercive power and credibility is an important problem for NATO. Over and over again, important agreements and promises during the summits have not been kept. Table 7 on the evolution of capabilities show that many capability modernization goals have not been met and that most nations are well under the agreed upon expenditure and deployed personnel ratios. NATO provides many services, among them collective defense, and there is a price to pay to get those services. Presently, many allies are reaping the benefits without paying the fair price. Possible solutions to this credibility problem are mechanisms that promote adequate level of national military expenditures and relevant capabilities. Inside a state, such a mechanism would take the form of punitive measures, like fines or even prison. However, because of the nature of the alliance, such measures are not possible or would have to be very limited in scope to

function and be accepted. NATO should look first at measures that would positively influence allies to comply, like allocating NATO military school positions, invitation to multinational exercises, qualification for military-aid funding programs and even technology-sharing possibilities. It should also look at negative measures that would foster accountability by publically identifying non-compliant nations during summit declarations and by giving formal blames. Such measure would send a message: there is a price to pay for the service NATO provides, and the allies are resolved to making sure everyone contributes fairly.

Line of Effort 2: Improve Operational Readiness

Objective 2A: Align Capabilities to the Adjusted LoA

A problem to NATO preparedness is the lack of a standing and ready force package to commit to operations. In essence, there is very little predictability on the availability of required capabilities, which prevents NATO from reacting quickly and acting decisively in the early period of an intervention. Generating and tailoring a task force requires time and effort while most situations require rapid action. The intervention in Libya is a case in point. Chapter 4 demonstrated that NATO took weeks to organize an HQ capable to command and control the operation and to assemble the required capabilities for the air campaign. It had to rely heavily on the US quick reaction capacities in the first few weeks. NATO has to understand this service may not be available in the future.

Including an air-campaign in the LoA is only a first step. NATO also needs to adjust the alignment of operational-level HQs to an updated LoA, particularly in regards to the command and control of an air-campaign similar to Kosovo or Libya. Actually

NATO has three operational-level HQs (Joint Force Command (JFC) Brunssum, Naples and Lisbon).³ While JFC Lisbon specializes in managing the NRF and sea-born operations, both JFC Brunssum and Naples have land, air and maritime components. A possible solution would be to have these two HQs specialize in land or air operations. That would facilitate NATO's readiness to prepare an air-campaign more easily and improve its reaction time.

NATO also needs to align specific manpower and equipment capabilities to its potential operations. This would strictly be for preparation purposes. Nations would still keep the prerogative for the employment of their capabilities, but at least there would be some kind of preparation work that could streamline the reaction potential. This can be done through the NDPP, where NATO can negotiate with each nation what they can or are willing to provide in regards to each operation in the LoA.

Objective 2B: Prepare for Conducting Operations without the US

Chapter 4 demonstrated that NATO cannot act decisively in a large-scale land or air campaign without the support of the US. In the present conditions, strong US leadership and commitments are critical conditions to a NATO large-scale operation. This reality hampers NATO's freedom of action and world-wide credibility. If the European allies had the formal objective to organize their forces to conduct within their means the operations set-out in the LoA, it would give them an incentive to prepare better and acquire lacking capabilities, like proper support aircraft that are critical to an air-campaign for instance. European nations have to break-out of their expectations that the US will continuously and indefinitely provide crucial capabilities. They need to feel the urge to generate them by themselves. This will require greater cooperation and

integration based on a clear vision of a European force capable of acting independently within NATO's LoA, recognizing that the US will have other priorities and more limited means in the future.

Objective 2C: Assign Permanent Multinational Groupings

One of the ways to achieve the previous objective with limited costs is to organize the forces more efficiently into permanent groupings of nations. The idea would be to assign groupings that have cultural similarities or geographic proximity in order to enhance predictability, preparedness and possibly create interesting synergy. Based on a multinational-division (MND) frame, each grouping would be a mix of core nations with a proportionate allocation of medium and smaller nations. These groupings could train together and have incentives for multinational procurement. On the long term, there certainly are valuable gains to be made from working with the same nations on a permanent basis.

Table 12. Suggested Multinational Division groupings					
MND North-West	MND Central	MND East	What each Nation could provide for		
			Large-scale land operation	Small-scale land operation	NRF
UK	France	Turkey	Brigade(+)	Battalion	Battalion
Spain	Germany	Poland	Battalion(+)	Battalion(-)	Company
Canada	Italy	Bulgaria	Battalion	Battalion(-)	Company
Netherlands	Greece	Czech Rep	Battalion	Company	Company
Norway	Portugal	Slovakia	Company(+)	Company	Company
Latvia	Denmark	Hungary	Company(+)	Company	Company
Lithuania	Belgium	Croatia	Company(+)	Company	Platoon(+)
Estonia	Luxembourg	Romania	Company	Platoon(+)	Platoon(+)
Iceland	Albania	Slovenia	Company(-)	Platoon(+)	Platoon(+)

Source: Created by author.

Line of Effort 3: Improve Capabilities

Objective 3A: Coordinate Acquisition of Missing Capabilities through the NDPP

The findings of chapter 4 demonstrated that particular capabilities identified in the PCC ten years ago are still lacking. NATO should actively promote their acquisition at the national level, and if not feasible on the short-term, seek other alternative to ensure those capability can be obtained in a reasonable timeframe. The first step is to identify the specific capabilities and inform the allies of the remaining shortfalls. The analysis of question 2 to 4 in chapter 4 identifies these capability shortfalls:

1. Transport helicopters (heavy);
2. Mine-resistant patrol vehicles;
3. UAVs and intelligence processing (mainly targeting);
4. Specialized support aircrafts (air-to-air refueling and electronic warfare);
5. PGM inventory

The NDPP would be a good medium to inform the allies and coordinate acquisition priorities in order to maximize overall financial resources. Once acquired, the NDPP could then incorporate these capabilities inside all the other capability requirements of the LoA. The importance of a precise LoA is crucial for the process to be efficient. The PGM inventory is a good example of this necessity. By quantifying the scale of the air-campaign that would satisfy NATO's ambitions, the NDPP could deduce measurable objectives in the amount of total PGMs it requires, and then allocate proportionate contribution objectives to specific nations for instance. Because financial resources are limited, it is important to prioritize capabilities by importance, quantify the amount required and coordinate national acquisitions to prevent redundancy and improve

efficiency. The NDPP can do that. But to function, the allies have to cooperate and participate in the process.

Objective 3B: Promote Out-of-Boundaries Procurement and Collective R&D

The natural tendency to procure military equipment within national boundaries is a serious handicap to generate efficiency gains. Even today, after years of European political integration, European nations procure 73 percent of their defense equipment and spend 87 percent of their research efforts within their boundaries.⁴ The results are various types of equipment offering the same capabilities, each requiring their own research and development funds. There are certainly potential efficiency and cost saving gains to be made from a more integrated European defense market. NATO could play an active coordination role through the NDPP in identifying potential gains from R & D cooperation when appropriate and by possibly helping to settle commercial disputes when they occur. It could also conduct a study in order to display to the allies the potential long-term gains that can be made from a more open market. But changing long-standing mentalities would only be a first step. It would then need to play a more active role by seeking potential partner-nations and trying to build bridges between them. Once again, the NDPP can be a useful forum to promote cooperation and coordinate efficiently.

Objective 3C: Promote Multinational Procurement

As discussed in the previous chapters, NATO has already embarked on multinational procurement with the AWACS, the Strategic Airlift Capability (SAC–10 NATO countries purchased and share three Boeing C-17), the Strategic Airlift Interim Solution (SALIS–14 NATO nations charter six Antonov transport aircrafts from a

civilian company) and the upcoming Alliance Ground Surveillance where 13 allies pooled financial resources to purchase five strategic UAVs (Global Hawk). When appropriate, it must continue to do so because this collaborative method guarantees the availability of these capabilities. This system seems to work well with combat support capabilities that are not directly involved in combat but provide a critical support role. In the future, NATO should look to include air-to-air refueling and operational-level UAVs (such as the Predator or Reaper) to such multinational programs.

The idea to gain efficiency through capability specialization is also promising, but lacks political integration. To have long-term real benefits, specialization needs full integration so that the specialized capabilities can be used and deployed without national consent. NATO is nowhere near becoming such an alliance in the short and medium term, but NATO should monitor the situation to seek feasibility in the long term. At some point in time, specialization will become necessary depending on the perceived threat and what kind of ambition NATO wants to set for itself. In the meantime, NATO should concentrate on the more realistic goal to gain efficiency through greater cooperation and more multinational procurement, particularly in the combat support role.

Recommendations for Future Research

The comprehensive nature of this study required a general overview where the secondary questions were meant to be used as building blocks to answer the primary question. Because of the extended period covered, each answer is made in general terms and could be detailed further in future research. Furthermore, in addition to the secondary questions, parallel issues have been raised and warrant the attention of researchers.

1. Why do European Nations deploy a smaller ratio of soldiers to out-of-area operations? Is it first and foremost for political reasons, or have they achieved their maximum ratio (4 percent) in the last decade? What are the other reasons and what are possible options to augment that number?
2. What is the most efficient allocation of the military budget between personnel, equipment, infrastructure and training?
3. What are the long-term benefits that a more integrated and open-market defense industry can bring to the allies? What is the opportunity-cost from keeping the status quo?

Conclusion

This study used an operational approach to answer the primary question with a view toward recommending realistic solutions to one of NATO's most important challenge of the next decade. These recommendations are based on the author's interpretation of the findings from chapter 4, which revealed that NATO's operational efficiency still suffers from important capability shortages and challenges. These challenges stem from not only significant disparities between the allies in military expenditures and contributions to operations, but also from the world-wide context of an unfavorable economic situation and the inevitable US downsize in Europe. To address them, NATO will need to focus on three different fronts: political guidance, operational readiness and capability-building.

Improved political guidance through a more precise LoA and more balanced expenditure objectives will give NATO tools to plan better and financial maneuvering-room for future procurements. But most importantly, NATO needs to implement its

guidance more actively. It needs to play a more important role to give the allies the incentive to contribute more fairly and respect their commitments. This will not only enhance its credibility, but its efficiency at the same time.

NATO will also need to look for efficiency gains through better operational readiness. To do so, it will need to align its updated LoA potential operations to operational HQs and specific capabilities required to accomplish those operations. It will also need to augment its freedom of action by reducing its dependence on the US to conduct operations and by coordinating efforts so European nations can take-on any out-of-area operations at any time. One of the ways to do so is to permanently align European nations and Canada along a three multinational division structure. These formal organizations would foster synergetic relationship that could lead to efficiency gains and even multinational procurement agreements. They could also lead to better preparedness from lasting working relationships and habits.

Finally, NATO needs to coordinate more actively member states' procurement, promote out-of-boundaries procurement and develop multinational acquisitions. By taking a more active coordinating role, NATO can potentially make some efficiency gains and even procure expensive critical capabilities that would otherwise be too costly. To do that, NATO needs to get involved in the member states acquisition process by identifying critical shortfalls and coordinating their acquisition through different means. The NDPP is a great leverage tool that NATO will need to maximize in the near future.

Without a doubt, NATO faces challenging times. As the security threats continue to evolve and change, its members will have less resources to cope with them for the foreseeable future. But these times also provide opportunities. NATO will considerably

downsize the ISAF mission in the next few years, which will give a window of opportunity to readjust its posture. NATO needs to seize this opportunity and adapt to the changing circumstances. This study provides a path of realistic and achievable actions that could improve NATO's ability to face the difficult challenges of the next decade. One step at a time, NATO can change and evolve into a more efficient and relevant organization capable to take on those challenges.

¹These recommendations are for the approximate force size the US and European allies should be ready to provide for each potential LoA operations, which could be conducted simultaneously.

²Hacket, *The Military Balance* (2012), 468.

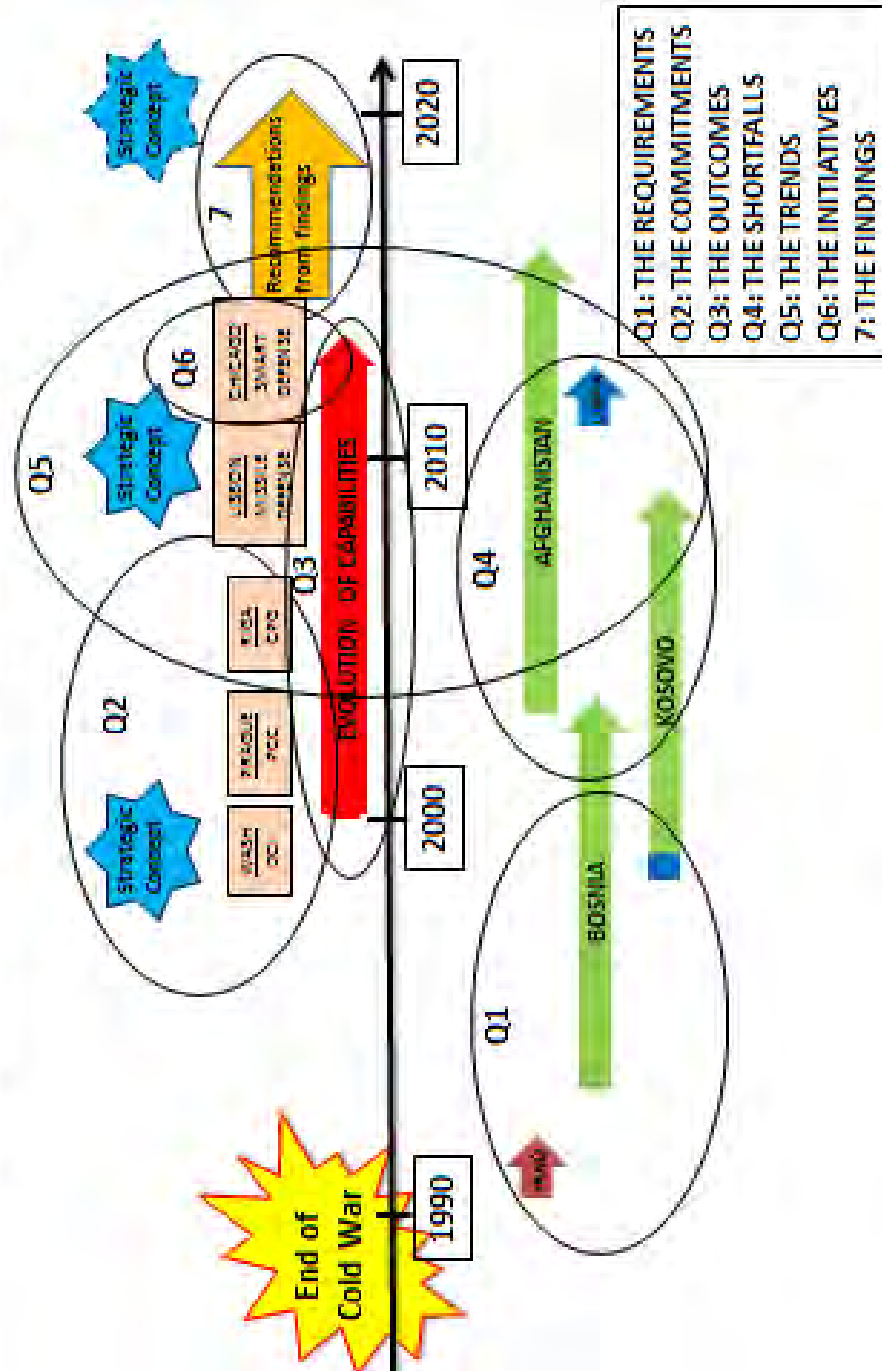
³Allied Command Operations, <http://www.aco.nato.int/> (accessed 24 October 2012).

⁴Hacket, *The Military Balance* (2012), 76.

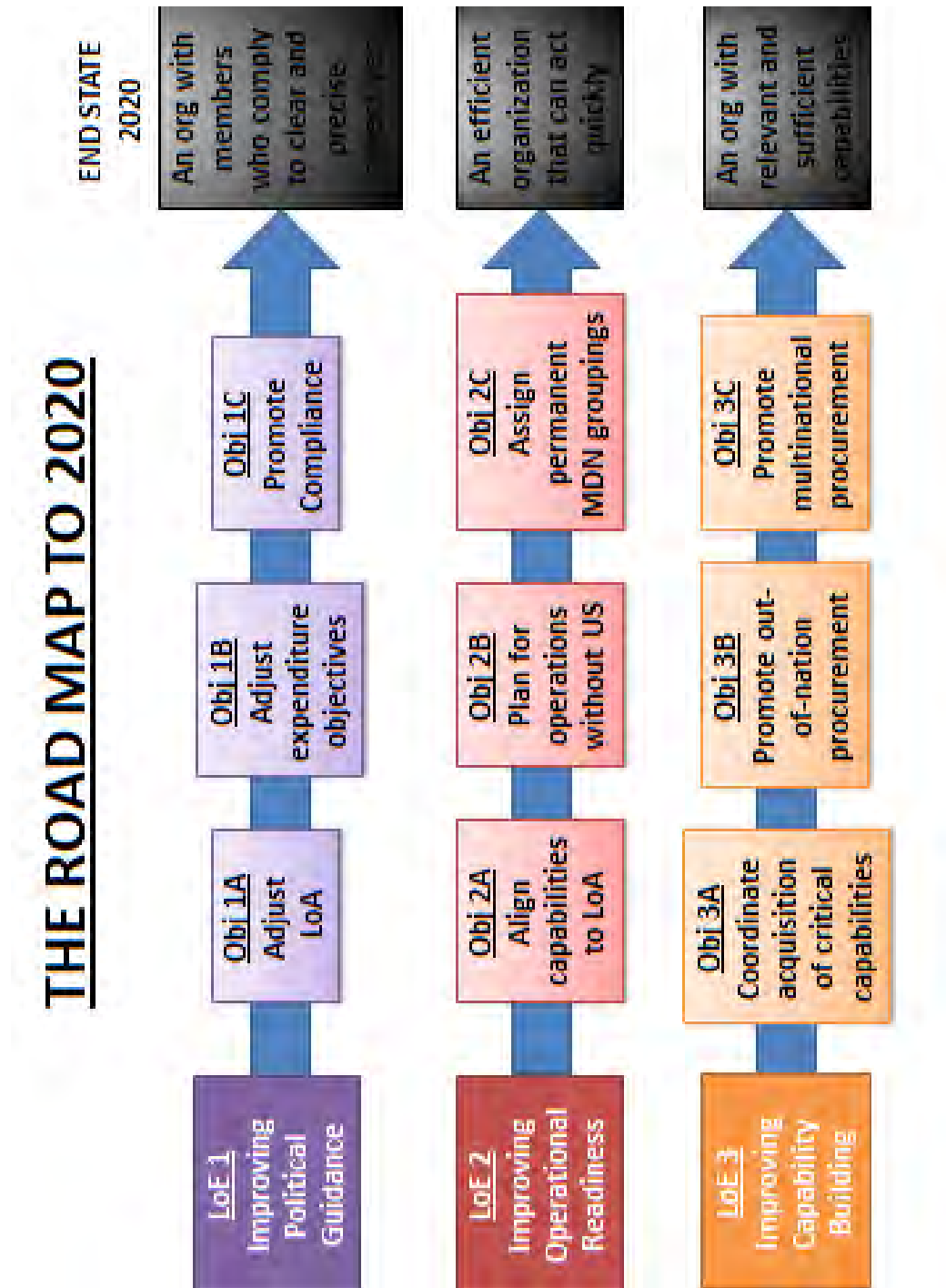
APPENDIX A

THE RESEARCH PLAN

THE RESEARCH PLAN THROUGH NATO'S EVOLUTION



APPENDIX B
THE ROAD MAP TO 2020



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